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1986 survey of the electronic funds transfer transaction system

BANK ADMINISTRATION INSTITUTE

1986 Survey of the Electronic Funds Transfer Transaction System

by

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Bank Administration Institute

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Foreword

Because of the constantly changing environment surrounding electronic payment systems, financial industry personnel must understand what is happening in the industry. They should keep abreast not only of technological advances but also of consumer attitudes and usage patterns associated with electronic delivery systems. Through a better understanding of these topics, informed bankers can develop successful strategies to capitalize on the proper placement and design of electronic delivery systems.

Bank Administration Institute has produced this Survey of Electronic Funds Transfer Transactions for the ninth consecutive year to provide the financial industry with the latest electronic payments systems data. It is designed to give financial institutions the data they need to examine their own electronic delivery systems and to determine whether their strategies are accurate or changes might be necessary. Included are automated clearing house (ACH), automated teller machine (ATM), and point-of-sale (POS) data that should help them examine customer usage patterns, growth trends, and transaction mix.

James B. Wiesler
Chairman of the Board
Bank Administration Institute

1986 Survey of the Electronic Funds Transfer Transaction System

1

ELECTRONIC FUNDS TRANSFER TRANSACTIONS

Retail payments systems continue to grow, both in the number of checks written and in electronic transactions. Just as check volume is expected to increase for the rest of the 1980s, electronic transaction volume is expected to increase for the rest of the decade at an even faster pace.

Electronic transactions came of age primarily because of improvements in technology and the consumer's willingness to accept a different form of receiving cash or paying bills. Although consumer acceptance of automated teller machines (ATMs) was slow to develop, many of today's consumers consider the ATM to be an acceptable form of banking. Since the use of automatic deposits and payments is becoming more popular, automated clearing house (ACH) volumes are increasing. However, there is room for continued growth.

The continued pressure on banks to reduce expenses in an increasingly competitive market has affected, and will continue to affect, the delivery structure of many of these institutions. While some banks are examining their delivery systems to determine if there are more efficient, less costly methods of providing services to their customers, others are experimenting with electronic-only branches, or electronic branches with reduced teller or platform staff. Still others are experimenting with interactive terminals to give customers self-service access to their balances, in-file information, interest rates, and loan and investment calculations; and to market various bank products and services. Because of these changes, the number of electronic transactions could grow rapidly.

For the purposes of the survey, which is the basis for this publication, electronic transactions are defined as consisting of those activities that are routed through the ACH, ATM, or the point-of-sale (POS) terminal.

ACH transactions continue to grow as more individuals opt for the convenience of automatic insurance payments, automatic mortgage payments, automatic utility payments, direct deposit payroll, direct deposit social security, and other forms of automatic payments or deposits. What was once primarily a corporate facility is increasingly becoming a retail facility also.

ATMs have been in existence since the late 1960s and the number of ATM transactions continue to grow. While this growth has been slower than many bankers would like, it has been consistent. Yet some bankers view this growth as a double-edged sword. They believe an ATM transaction costs less than a teller transaction because ATM transactions are processed electronically. Since the ATM is much more convenient and generally a seven-day, 24-hour access device, research indicates that ATM users come to the bank more often than once per week as do most teller users. Thus, customers who use the ATM several times per week actually may cost the financial institution more than those who visit the teller only once per week. However, banks continue to offer ATMs as a viable delivery vehicle because many customers have come to depend on them and there is a perceived value in having access to ATMs.

Most growth in ATM volume is taking place in interchange transactions, or those transactions occurring at terminals not owned by the customer's financial institution. This growth can be attributed to the increasing number of banks participating in regional and national ATM networks.

POS activity is beginning to build slowly. Several regional networks and a number of large merchants are attempting to put the system's apparatus in place to support terminals at their locations. This system will enable customers to use their bank debit cards to pay for goods and services from their checking and savings accounts. Many credit card customers are accustomed to having their purchases authorized by the telephone or an authorization terminal at the point of purchase. Still they know that they are using the bank's money, and there is a time delay before the transaction is applied to their account and payment is due. In the case of POS, the major difference is that when customers use their debit cards at POS terminals, the funds are deducted from their accounts almost immediately. Thus, they lose the use of their funds at the time of purchase. Customers' willingness to accept this loss of "float" is one of many issues that will determine the outcome of POS volumes.

Survey Respondents

In August 1986, Bank Administration Institute mailed the 1986 Survey of Electronic Funds Transfer Transactions to 225 commercial banks in the United States. All of these banks had assets of more than $250 million. The survey is included in Appendix A.

Respondents are separated into 16 geographic groups to provide information in a regional format. Of the 225 banks included in the survey sample, 139 responded for a rate of 62 percent. Table 1 indicates the number of banks responding from each region. Included in Appendix B are a map detailing the configuration of each region and Table B-1 that shows the number of respondents by area since 1984.

TABLE 1

NUMBER OF RESPONDENTS BY REGION

Region	Number of Respondents
Boston	11
New York	14
Philadelphia	10
Pittsburgh	4
Washington, D.C.	9
Atlanta	25
Chicago	8
Cleveland	6
Detroit	7
Minneapolis/St. Paul	2
St. Louis	11
Dallas	3
Houston	1
Los Angeles	9
San Francisco	14
Denver	5
Total	139

Background

The Survey of Electronic Funds Transfer Transactions was conducted as a part of BAI's Check Collection Performance Survey until 1979, at which point it became a separate survey. Table 2 shows the number of respondents since 1979.

TABLE 2

NUMBER OF RESPONDENTS SINCE 1979

Year	Number of Respondents
1979	153
1980	170
1981	157
1982	161
1983	107
1984	110
1985	107
1986	139

Data Collection

The data were collected for the month of September 1986. Because of differences in reporting systems from one bank to another, not all banks were able to complete every question. Only those institutions that furnished valid information for all components of a given mathematical formula were included in a table's results. Mathematical formulas pertaining to each component of a table are shown at the end of the table. Thus, by using the formula with the survey copy provided in Appendix A, bankers can insert their own data to determine their own results.

Survey Highlights

ACH

- In a reversal of a recent trend, there were more debits (54.9 percent) originated than credits (45.1 percent) in 1986.
- Debits accounted for only 35.9 percent of the items received.
- The percentage of items originated (49.8 percent) was almost as great as that of items received (50.2 percent)—representing a major shift from the prior year's results.
- Total items returned improved 0.2 point over 1985, but there was no improvement in the percentage of returned originated items.
- Insurance payments accounted for the debits most frequently received—47.9 percent.
- Payroll deposits accounted for 76.6 percent of the originated credits.
- Social Security deposits (41.8 percent) and payroll deposits (40.3 percent) were the most common credits received.

ATM

- Customers still view ATMs as primarily cash dispensers and balance providers, as 84.8 percent of all proprietary ATM transactions were cash withdrawals and balance inquiries and 91.7 percent of all interchange transactions fell within these two categories.
- Fully 64.5 percent of the respondents provided a balance automatically after each transaction.
- The average amount withdrawn from a proprietary checking account was $50 and the average interchange checking withdrawal was $45.
- The average checking deposit in a proprietary ATM was $495.
- In areas with both cash dispensers and full-function ATMs, the average number of ATM transactions per month was 5,118, while the cash dispenser averaged 3,560 transactions per month.

- In areas with no cash dispensers, full-function ATMs accepting both proprietary and interchange transactions, there was an average of 5,703 transactions per month.

- In areas with no cash dispensers that accepted only proprietary transactions, an average of 4,944 transactions per month were made at the ATM.

- A total of 77.1 percent of the installed ATMs were located at branch sites.

- Through-the-wall units represented 62.5 percent of branch installations.

- Grocery/retail stores accounted for 28.3 percent of off-premise ATM locations—the greatest percentage.

- The great majority—94.9 percent—of cash dispensers—were installed at off-premise locations.

- As in the case of ATMs, most (82.9 percent) off-premise cash dispenser units were installed in grocery/retail stores.

- Even though through-the-wall units were installed in a greater number of locations, branch vestibule units averaged more proprietary transactions: 4,903 for vestibule units and 4,589 for through-the-wall units.

- The most proprietary and interchange transactions per month took place at university/college campus ATM facilities—5,445 proprietary and 3,095 interchange.

- Grocery/retail store outlets were the ATM sites most used for interchange transactions, with 3,004 transactions per month.

- Each month, 1,702 proprietary transactions and 1,840 interchange transactions took place at the average cash dispenser.

- The largest number of interchange transactions per off-premise cash dispenser also occurred on the university/college campus, with 3,095 transactions per month.

- While 67.6 percent of the respondents indicated that they planned to install new machines in new locations in 1987, only 17.3 percent said they planned to put new machines in the same locations.

- Fully 97.0 percent of ATM/cash dispensers were on-line.
- For the first time, more than half (53.7 percent) of the respondents reported they charge their customers for ATM/cash dispenser use.
- Of the respondents, 27.8 percent levy a per-transaction fee and an additional 27.8 percent charge only if the customer's balance falls below a specified minimum.
- Of the respondents who require a fee, 41.8 percent said they charge less for an ATM/cash dispenser transaction than they do for a paper transaction; 38.0 percent charge the same; and 20.2 percent charge more.
- The percentage of active (used at least once per month) proprietary debit cards as a subset of total cards outstanding fell from 51.5 percent in 1985 to 50.3 percent in 1986.

POS

- Credit card transactions represented 58.9 percent of the proprietary POS volumes and 76.3 percent of the interchange POS volumes.
- Proprietary checking transactions rose from 21.9 percent in 1985 to 31.7 percent in 1986, a 9.8 percent gain.
- The average proprietary credit card transaction was $107.79 and an interchange transaction averaged $79.64.
- Proprietary checking and interchange transactions averaged $49.73 and $50.25, respectively.
- The average dollar value of all POS transactions was $73.71.
- The average number of POS transactions per terminal was 115.7.
- Only 12.8 percent (18) of the total survey respondents indicated that they had POS terminals in operation in 1986—a total of 13,358 terminals.
- Seventeen respondents, or 12.2 percent, said that they plan to install a total of 16,166 POS terminals in 1987.

- Fully 65.5 percent of the terminals were installed in retail stores.
- A total of 61.6 percent of the installed terminals required a PIN.
- A majority of the respondents (69.9 percent) did not charge their customers for POS transactions.

2

AUTOMATED CLEARING HOUSE (ACH) RESULTS

The ACH is a network of separate organizations that work together to transmit payments and receipts electronically to and from their member financial organizations.

As of December 1986, there were 32 ACH organizations. According to the National Automated Clearing House Association, 28 of these groups were affiliated with the Federal Reserve system and the other four were private organizations. The latter were located in Arizona, California, Hawaii, and New York.

Because our survey does not include every ACH member, the numerical data represented in the survey is meaningless. What is useful is the percentage comparisons from year to year. For this reason, all data reported in this section is presented in percentage format.

ACH Items Originated

For 1986, the data indicate that 54.9 percent of all items originated by the responding banks were debits while 45.1 percent were credits. These figures are a reversal of those for 1985 that indicated 46.0 percent of items were debits and 54.0 percent were credits. Table 3 indicates how the percentage of debits had been decreasing in recent years until the 1986 turnaround. However, several respondents included internal bank transactions, such as ATM transactions and loan transactions, that affected the debit volumes.

ACH Items Received

The number of incoming debits being received continued its downward trend in 1986, dropping to 35.9 percent from 38.4 percent in 1985.

ACH Items Originated versus Received

In 1985, the survey indicated an almost equal split between the percentage of items originated (49.8 percent) and that of items received (50.2 percent). The 1986 statistics revealed a significant shift; 58.2 percent of the total ACH items that year were originated. By comparison, only 41.8 percent were received. Again, this shift occurred because several respondents included internal transactions as originated items. Table 5 shows that 68 percent of all debits were originated and 32 percent were received, as compared to 54.3 percent and 45.7 percent, respectively, in 1985. The percentage of credits originated in 1986 (49.4 percent) almost equaled that of credits received (50.6 percent). In 1985 credits originated and those received were 45.1 percent to 54.9 percent, respectively.

ACH Returned Items

Survey respondents were asked to indicate ACH items they received but returned to the originator because they could not post to an account or because there was no prenotification on file. Such items are indicated in the tables as originated returned item transactions. Transactions that respondents reported they originated but were returned to them by the ACH or the receiver are indicated in the survey as received returned items. Respondents were not asked to indicate the reasons for returned items.

Figures for 1986 pointed to a general reduction in the percentage of total items returned. The respondents indicated that items they received but returned to the originator decreased from 0.5 percent in 1985 to 0.3 percent in 1986. Debits returned improved from 0.7 percent to 0.5 percent while credits returned remained unchanged at 0.2 percent. Credits returned have held at 0.2 percent since 1983.

There was no change in total items originated but returned by the ACH or the receiver. In both 1986 and 1985, 0.7 percent of originated items were returned. The percentage of debits returned to the respondents increased slightly from 1.4 percent to 1.5 percent while the percentage of credits returned remained the same at 0.2 percent. The increase in the percentage of debits returned did not change the total percentage of originated returned items.

In any event, the return of ACH items causes many problems for originating and receiving banks alike. According to some respondents, returned items sometimes are difficult to identify because they are not separate from regular daily transactions, and unnecessary delays in correcting errors are the result. Continued improvement in identifying and resolving returned items would benefit everyone.

ACH Transaction Mix

According to survey data, 53.1 percent of respondent-originated debits were difficult to identify because, as previously stated, some respondents included internal transactions in their figures. Of items identified, insurance payments accounted for 25.2 percent of originated debits. Other identified items were corporate payments (17.2 percent), personal computer/telephone bill payments (2.6 percent), and home mortgages (1.9 percent).

Debits received by respondents reflect a large increase in the percentage of insurance payments, from 20.5 percent in 1985 to 47.9 percent in 1986. This significant gain suggests that insurance companies have done an effective job of emphasizing the convenience and other benefits derived from paying by automatic draft through the ACH.

Payroll deposits accounted for the major share of respondent-originated credits. Payroll deposits totalled 76.6 percent of such credits while 22.8 percent were unidentified. Respondents received nearly equal numbers of Social Security deposit and payroll deposit credits—41.8 percent and 40.3 percent, respectively. These large percentages of deposits reflect the great impact of the private sector on the ACH system.

TABLE 3

PERCENTAGE OF ACH DEBITS AND CREDITS ORIGINATED BY AREA

Area	Percent Debits+			Percent Credits++		
	1984	1985	1986	1984	1985	1986
Boston	54.7%	28.9%	51.9%	45.3%	71.1%	48.1%
New York	60.0	40.1	38.3	40.0	59.9	61.7
Philadelphia	24.2	23.5	24.5	75.8	76.5	75.5
Pittsburgh	48.3	9.9	50.0	51.7	90.1	50.0
Washington, D.C.	32.1	33.8	61.2	67.9	66.2	38.8
Atlanta	49.4	54.3	62.2	50.6	45.7	37.8
Chicago	36.1	51.7	45.2	63.8	48.3	54.8
Cleveland	49.3	45.1	35.0	50.7	54.9	65.0
Detroit	46.5	62.8	58.1	53.5	37.2	41.9
Minneapolis/St. Paul	*	*	55.8	*	*	44.2
St. Louis	71.2	85.5	63.8	28.8	45.7	36.2
Dallas	27.1	50.4	38.6	72.9	49.6	61.5
Houston	85.3	45.6	18.6	14.7	54.4	81.4
Los Angeles	50.2	57.7	60.3	49.8	42.3	39.7
San Francisco	55.3	45.7	44.8	44.7	54.3	55.2
Denver	51.1	53.6	69.7	48.9	46.4	30.3
Average	52.1%	46.0%	54.9%	47.9%	54.5%	45.1
Median	42.4%	37.6%	45.2%	57.6%	63.5%	60.4

*No respondents; +$\frac{Q1}{Q5}$ x 100; ++$\frac{Q3}{Q5}$ x 100.

TABLE 4

PERCENTAGE OF ACH DEBITS AND CREDITS RECEIVED BY AREA

Area	Percent Debits+ 1984	1985	1986	Percent Credits++ 1984	1985	1986
Boston	51.4%	26.5%	45.6%	48.6%	73.5%	54.4%
New York	27.1	29.3	36.5	72.9	70.7	63.5
Philadelphia	31.9	29.2	50.4	68.1	70.8	45.6
Pittsburgh	28.7	42.3	21.9	71.3	57.7	78.1
Washington, D.C.	43.9	34.0	25.0	56.1	66.0	75.0
Atlanta	71.6	38.1	32.5	28.4	61.9	67.5
Chicago	46.4	46.3	36.0	45.9	48.2	64.0
Cleveland	46.0	58.1	34.0	54.0	41.9	66.0
Detroit	29.6	35.0	34.1	70.4	65.0	65.9
Minneapolis/St. Paul	32.4	*	35.0	67.6	*	65.0
St. Louis	65.1	46.3	41.2	34.9	53.7	58.8
Dallas	33.8	40.4	34.2	66.2	77.3	65.8
Houston	71.8	25.0	25.0	28.2	75.0	75.0
Los Angeles	50.7	33.5	43.0	49.3	66.5	57.0
San Francisco	60.5	34.7	31.4	39.5	65.3	68.6
Denver	57.0	58.4	35.5	43.0	41.6	64.5
Average	54.5%	38.4%	35.9%	45.4%	61.6%	64.1%
Median	51.8%	35.8%	34.5%	47.4%	64.1%	65.5%

*No respondents; $+\frac{Q2}{Q6} \times 100$; $++\frac{Q4}{Q6} \times 100$.

TABLE 5

PERCENTAGE OF ACH ITEMS ORIGINATED VERSUS RECEIVED BY AREA

	Percent of Debits+					
	Originated			Received		
Area	1984	1985	1986	1984	1985	1986
Boston	69.8%	59.6%	67.1%	30.2%	40.4%	32.9
New York	92.7	66.9	69.4	7.3	33.1	30.6
Philadelphia	41.0	42.5	22.0	59.0	57.5	78.0
Pittsburgh	77.7	7.0	82.0	22.3	93.0	18.0
Washington, D.C.	31.3	43.4	76.3	68.7	56.6	23.7
Atlanta	32.1	54.7	70.8	67.9	45.3	29.2
Chicago	80.4	60.9	79.8	19.6	39.1	20.2
Cleveland	61.8	35.9	53.5	38.2	64.1	46.5
Detroit	29.7	83.3	79.3	70.3	16.7	20.7
Minneapolis/St. Paul	*	*	79.2	100.0	*	20.8
St. Louis	51.5	67.1	83.8	48.5	32.9	16.2
Dallas	27.6	57.4	54.6	72.4	42.6	45.4
Houston	49.4	49.8	41.3	50.6	50.2	58.7
Los Angeles	45.7	47.6	18.0	46.2	52.4	82.0
San Francisco	34.7	39.7	46.8	65.3	60.3	53.2
Denver	19.4	23.0	88.7	80.6	77.0	11.3
Average	54.7%	54.3%	68.0%	45.3%	45.7%	32.0%
Median	30.0%	36.8%	54.2%	71.9%	64.4%	45.8%

*No respondents; + $\frac{Q1}{Q1 + Q2}$ x 100; ± $\frac{Q3}{Q3 + Q4}$ x 100; § $\frac{Q5}{Q5 + Q6}$ x 100.

Note: These footnotes also pertain to the continuation of Table 5 on the following page.

TABLE 5 (Continued)

	Percent of Credits±					
	Originated			Received		
Area	1984	1985	1986	1984	1985	1986
Boston	66.9%	56.7%	61.3%	33.1%	43.3%	38.7%
New York	75.8	42.1	67.6	24.2	57.9	32.4
Philadelphia	50.4	49.9	46.8	49.6	50.1	53.2
Pittsburgh	59.9	33.5	56.1	40.1	66.5	43.9
Washington, D.C.	43.0	43.6	40.5	57.0	56.4	59.5
Atlanta	55.0	38.5	41.5	45.0	61.5	58.5
Chicago	87.9	58.2	72.9	12.1	41.8	27.1
Cleveland	58.6	48.7	52.5	41.4	51.3	47.5
Detroit	17.0	61.5	58.9	83.0	38.5	41.1
Minneapolis/St. Paul	*	*	61.9	100.0	*	38.1
St. Louis	44.5	48.4	67.2	55.6	51.6	32.8
Dallas	34.4	41.0	49.9	65.6	59.0	50.1
Houston	74.3	28.2	50.7	70.0	71.8	49.3
Los Angeles	46.2	25.1	9.8	53.8	74.9	90.2
San Francisco	39.7	29.4	33.0	60.3	70.6	67.0
Denver	23.4	26.7	65.2	76.6	73.3	34.8
Average	57.1%	45.1%	49.4%	42.9%	54.9%	50.6%
Median	40.9%	37.0%	47.8%	60.4%	63.6%	52.2%

	Percent of Total ACH Items§					
	Originated			Received		
Area	1983	1984	1985	1983	1984	1985
Boston	68.5%	57.5%	64.2%	31.5%	42.5%	35.8%
New York	85.1	59.7	68.3	14.9	40.3	31.7
Philadelphia	47.7	48.0	36.7	52.3	52.0	63.3
Pittsburgh	67.4	24.4	66.6	32.6	75.6	33.4
Washington, D.C.	38.4	43.5	56.8	61.6	56.5	43.2
Atlanta	40.7	45.9	55.9	59.3	54.1	44.1
Chicago	84.0	58.2	75.8	16.0	41.8	24.2
Cleveland	60.1	42.0	52.9	39.9	58.0	47.1
Detroit	21.2	73.6	69.3	78.8	26.4	30.7
Minneapolis/St. Paul	*	*	70.5	100.0	*	29.5
St. Louis	49.2	52.4	76.9	50.8	47.6	23.1
Dallas	32.2	52.0	51.6	67.8	48.0	48.4
Houston	45.1	35.2	48.6	54.9	64.8	51.4
Los Angeles	46.0	34.5	13.5	54.0	65.5	86.5
San Francisco	36.7	33.3	38.1	63.3	66.7	61.9
Denver	21.2	24.6	79.9	78.8	75.4	20.1
Average	55.8%	49.8%	58.2%	44.2	50.2%	41.8%
Median	35.9	38.7%	47.6%	64.1	61.7%	52.4%

TABLE 6

PERCENTAGE OF ACH ITEMS RETURNED OF ITEMS ORIGINATED BY AREA

	Percent Debits+			Percent Credits±			Percent Total§		
Area	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	0.2%	0.7%	0.3%	0.1%	0.1%	0.2%	0.1%	0.3%	0.2%
New York	3.3	0.8	0.7	0.2	0.2	0.2	2.1	0.4	0.4
Philadelphia	1.0	1.1	0.9	0.3	0.1	0.1	0.5	0.4	0.3
Pittsburgh	0.0	8.3	0.2	0.1	0.3	0.2	0.1	1.1	0.2
Washington, D.C.	3.1	1.9	0.4	0.7	0.3	0.1	1.5	0.8	0.3
Atlanta	1.0	0.7	0.5	0.1	0.2	0.2	0.6	0.5	0.4
Chicago	0.1	0.1	0.4	0.1	0.3	0.1	0.1	0.2	0.3
Cleveland	0.4	1.8	1.6	0.2	0.5	0.3	0.3	1.1	0.8
Detroit	1.5	0.2	0.4	0.3	0.0	0.1	1.1	0.2	0.3
Minneapolis/St. Paul	*	*	*	*	*	*	*	*	*
St. Louis	0.2	0.3	0.1	0.1	0.2	0.0	0.2	0.3	0.1
Dallas	0.2	0.3	1.2	0.0	0.0	0.1	1.1	0.2	0.5
Houston	0.0	2.3	4.7	0.0	0.0	0.0	0.0	1.1	0.9
Los Angeles	2.3	2.0	2.1	0.5	0.7	0.6	1.4	1.9	1.6
San Francisco	1.8	1.3	1.5	0.7	0.5	0.4	1.4	1.3	0.9
Denver	0.4	0.5	0.1	0.1	0.0	0.0	0.2	0.3	0.1
Average	1.6%	0.7%	0.5%	0.2%	0.2%	0.2%	0.9%	0.5%	0.3%
Median	1.0%	1.4%	1.4%	0.1%	0.2%	0.2%	0.6%	0.8%	0.8%

*No respondents; +$\frac{Q7}{Q1}$ x 100; ±$\frac{Q9}{Q3}$ x 100; § $\frac{Q11}{Q5}$ x 100.

TABLE 7

PERCENTAGE OF ACH ITEMS RETURNED OF ITEMS RECEIVED BY AREA

Area	Percent Debits+			Percent Credits±			Percent Total§		
	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	0.6%	3.5%	2.6%	0.2%	0.3%	1.0%	0.4%	1.2%	1.8%
New York	52.4	2.8	2.3	0.7	0.1	0.2	14.7	1.1	1.0
Philadelphia	0.4	0.5	0.4	0.3	0.2	0.1	0.3	0.3	0.2
Pittsburgh	1.4	0.1	0.2	0.1	*	0.2	0.5	0.1	0.1
Washington, D.C.	0.6	1.8	2.4	0.3	1.3	0.1	0.4	1.4	0.7
Atlanta	0.9	1.1	1.5	0.1	*	0.2	0.7	0.4	0.6
Chicago	4.2	2.7	4.7	0.7	0.7	1.3	2.4	1.6	2.5
Cleveland	3.8	1.0	1.3	0.1	0.3	0.2	1.8	0.7	0.6
Detroit	0.5	0.1	0.8	0.0	*	0.1	0.1	*	0.3
Minneapolis/St. Paul	0.0	0.0	*	0.0	0.0	*	0.0	0.0	*
St. Louis	0.7	1.6	3.4	0.1	0.1	0.1	0.5	0.8	1.5
Dallas	0.2	0.7	1.4	0.1	0.2	0.0	0.1	0.5	0.5
Houston	0.0	1.1	1.1	0.0	0.0	0.1	0.0	0.3	0.4
Los Angeles	1.9	1.5	0.3	0.1	0.1	0.0	1.0	0.7	0.2
San Francisco	0.4	0.6	0.9	0.1	0.1	0.1	0.3	0.4	0.4
Denver	0.4	0.5	3.1	0.0	0.0	0.2	0.3	0.3	1.2
Average	2.6%	1.4%	1.5%	0.2%	0.2%	0.2%	1.5%	0.7%	0.7%
Median	0.4%	0.3%	1.0%	0.0%	0.1%	0.1%	0.2%	0.3%	0.5%

*No respondents; +$\frac{Q8}{Q2}$ x 100; ±$\frac{Q10}{Q4}$ x 100; § $\frac{Q12}{Q6}$ x 100.

TABLE 8

PERCENTAGE OF ACH DEBIT TRANSACTIONS ORIGINATED BY TYPE OF TRANSACTION BY AREA

Area	Insurance Premium+			Home Mortgage±		
	1984	1985	1986	1984	1985	1986
Boston	6.4%	46.3%	67.1%	1.1%	0.8%	0.9%
New York	91.3	24.8	26.8	0.4	0.0	0.8
Philadelphia	3.0	9.1	10.4	0.2	4.6	*
Pittsburgh	2.4	0.0	0.7	0.0	0.0	0.3
Washington, D.C.	56.6	36.0	20.2	0.0	2.6	3.4
Atlanta	34.4	24.1	29.7	2.2	5.1	2.6
Chicago	25.2	21.1	50.6	15.5	1.4	1.4
Cleveland	17.5	13.9	5.5	1.8	1.7	1.9
Detroit	0.0	0.0	2.2	0.0	6.4	0.9
Minneapolis/St. Paul	*	0.0	*	*	0.0	*
St. Louis	46.9	47.5	30.8	6.5	1.0	2.5
Dallas	6.9	19.3	45.0	1.5	0.3	4.1
Houston	0.0	0.0	*	0.0	0.0	*
Los Angeles	21.6	32.6	38.3	0.0	2.2	1.7
San Francisco	2.2	3.2	6.3	0.1	7.0	12.0
Denver	68.8	79.3	13.6	2.7	1.2	1.0
Average	51.8%	27.7%	25.2%	1.6%	2.3%	1.9%
Median	0.0%	0.0%	27.0%	0.0%	0.0%	4.0%

*No respondents; +$\frac{Q13}{Q25} \times 100$; ±$\frac{Q15}{Q25} \times 100$; § $\frac{Q17}{Q25} \times 100$; ++$\frac{Q19}{Q25} \times 100$; #$\frac{Q21}{Q25} \times 100$;

°$\frac{Q23}{Q25} \times 100$.

Note: These footnotes also pertain to the continuation of Table 8 on the following page.

TABLE 8 (Continued)

	P/C Telephone Bill Payment§			Corporate Payment++		
Area	1984	1985	1986	1984	1985	1986
Boston	0.2%	0.5%	0.5%	8.0%	27.1%	16.1%
New York	0.2	0.0	*	6.4	34.3	25.8
Philadelphia	11.7	2.2	0.1	63.4	17.4	56.1
Pittsburgh	0.3	0.0	*	97.4	100.0	5.6
Washington, D.C.	0.6	0.0	0.8	27.7	18.5	3.7
Atlanta	2.3	4.4	3.1	15.2	25.9	19.4
Chicago	0.0	0.0	*	38.0	74.6	44.8
Cleveland	0.0	0.0	*	17.3	85.6	50.0
Detroit	0.0	0.0	2.8	10.4	13.4	12.2
Minneapolis/St. Paul	*	0.0	*	*	0.0	*
St. Louis	0.0	11.0	12.1	34.7	32.7	19.7
Dallas	4.5	1.2	*	86.9	9.6	1.6
Houston	0.0	0.0	*	100.0	81.6	*
Los Angeles	0.0	1.1	11.6	1.4	0.5	1.3
San Francisco	0.0	0.0	*	6.0	7.8	12.3
Denver	0.0	0.0	*	6.1	6.0	1.5
Average	0.8%	1.9%	2.6%	17.5%	31.0%	16.5%
Median	0.0%	0.0%	6.1%	19.4%	25.2%	21.5%

	Corporate Trade Payment#			Other Payments°		
Area	1984	1985	1986	1984	1985	1986
Boston	N/A	N/A	*	84.4%	25.3%	15.4%
New York	N/A	N/A	*	1.7	40.9	46.6
Philadelphia	N/A	N/A	*	21.7	66.7	33.3
Pittsburgh	N/A	N/A	0.0	0.0	0.0	93.4
Washington, D.C.	N/A	N/A	*	15.0	3.7	71.9
Atlanta	N/A	N/A	0.2	45.9	38.5	45.0
Chicago	N/A	N/A	0.0	21.2	2.9	3.3
Cleveland	N/A	N/A	*	63.3	18.9	42.6
Detroit	N/A	N/A	0.0	89.6	80.2	81.8
Minneapolis/St. Paul	N/A	N/A	*	*	0.0	*
St. Louis	N/A	N/A	6.8	11.9	7.7	28.0
Dallas	N/A	N/A	*	0.2	43.5	49.3
Houston	N/A	N/A	100.0	0.0	18.4	*
Los Angeles	N/A	N/A	*	76.9	63.6	47.0
San Francisco	N/A	N/A	*	91.7	2.6	69.4
Denver	N/A	N/A	*	22.4	13.5	83.9
Average	N/A	N/A	0.7%	28.4%	28.2%	53.1%
Median	N/A	N/A	10.5%	20.6%	16.3%	64.8%

* — No Respondents
N/A -- Not Available

TABLE 9

PERCENTAGE OF ACH CREDITS ORIGINATED BY TYPE OF TRANSACTION BY AREA

Area	Payroll# 1986	Social Security+ 1986	Corporate Loan Payment± 1986	Corporate Trade Payment° 1986	Other Credits++ 1986
Boston	88.1%	*	0.7%	0.0	11.2%
New York	79.0	2.3%	*	0.0	18.7
Philadelphia	88.4	*	*	*	11.6
Pittsburgh	85.9	*	*	0.0	14.1
Washington, D.C.	85.1	*	*	*	14.9
Atlanta	65.9	6.2	1.4	0.6	26.0
Chicago	95.1	*	*	0.0	5.9
Cleveland	83.8	*	*	*	16.2
Detroit	53.6	*	*	0.1	46.4
Minneapolis/St. Paul	*	*	*	*	*
St. Louis	78.9	*	4.3	0.0	16.8
Dallas	100.0	*	*	*	*
Houston	*	*	*	*	*
Los Angeles	100.0	*	*	*	*
San Francisco	81.0	*	*	*	19.0
Denver	35.7	*	*	*	64.3
Average	76.6%	1.7%	0.5%	0.1%	21.1%
Median	98.3%	48.4%	3.0%	0.2%	17.8%

*No Respondents; $\frac{\#Q27}{Q37}$ x 100; $\frac{+Q29}{Q37}$ x 100; $\frac{\pm Q31}{Q37}$ x 100; $\frac{{}^{\circ}Q33}{Q37}$ x 100; $\frac{++Q35}{Q37}$ x 100

TABLE 10

PERCENTAGE OF ACH DEBIT TRANSACTIONS RECEIVED BY TYPE OF TRANSACTIONS BY AREA

	Insurance Premium+			Home Mortgage±		
Area	1984	1985	1986	1984	1985	1986
Boston	31.1%	25.2%	70.4%	0.0%	1.3%	0.9%
New York	56.5	21.0	20.3	0.4	0.7	0.4
Philadelphia	43.8	31.4	25.2	5.7	0.3	0.8
Pittsburgh	71.1	45.0	22.9	0.0	5.3	0.2
Washington, D.C.	46.8	26.0	28.2	1.5	2.0	3.1
Atlanta	75.5	25.4	59.8	1.8	4.3	4.9
Chicago	36.1	55.4	36.9	4.0	0.4	1.3
Cleveland	38.3	7.1	7.2	2.1	2.1	3.4
Detroit	10.6	6.3	3.6	0.0	0.0	0.7
Minneapolis/St. Paul	14.0	0.0	*	3.7	0.0	*
St. Louis	28.0	25.1	45.8	1.2	0.5	1.8
Dallas	58.7	0.0	29.0	0.1	0.0	2.4
Houston	77.0	20.0	*	0.1	1.0	*
Los Angeles	56.7	47.5	22.2	0.6	2.5	1.0
San Francisco	30.1	23.0	49.3	0.7	3.1	7.5
Denver	8.8	7.3	28.8	0.7	2.7	4.4
Average	50.8%	20.5%	47.9%	1.4%	2.1%	3.1%
Median	44.0%	32.6%	38.2%	0.2%	0.3%	2.7%

*No respondents; +$\frac{Q14}{Q26}$ x 100; ±$\frac{Q16}{Q26}$ x 100; §$\frac{Q18}{Q26}$ x 100; °$\frac{Q20}{Q26}$ x 100; #$\frac{Q22}{Q26}$ x 100;

++$\frac{Q24}{Q26}$ x 100.

Note: These footnotes also pertain to the continuation of Table 10 on the following page.

TABLE 10 (Continued)

Area	PC/Telephone Bill Payment§ 1984	1985	1986	Corporate Payment° 1984	1985	1986
Boston	1.0%	0.8%	1.0%	29.0%	31.7%	6.4%
New York	0.0	0.0	*	13.6	16.8	17.4
Philadelphia	1.9	2.1	5.9	23.0	31.4	37.0
Pittsburgh	16.7	0.0	*	0.0	5.6	12.4
Washington, D.C.	0.3	0.3	2.1	37.5	11.4	25.2
Atlanta	1.3	1.0	2.2	5.5	10.3	17.6
Chicago	3.2	0.6	1.6	40.0	27.0	42.4
Cleveland	0.1	0.0	*	19.2	23.1	14.3
Detroit	0.0	0.0	*	9.0	3.9	*
Minneapolis/St. Paul	6.8	0.0	*	6.3	0.0	*
St. Louis	54.6	1.4	0.9	6.3	15.1	15.7
Dallas	0.0	0.0	*	11.7	0.0	7.2
Houston	0.0	1.0	*	22.8	50.0	*
Los Angeles	5.0	0.3	2.0	4.9	6.1	5.8
San Francisco	1.9	0.2	2.3	4.8	6.2	12.0
Denver	0.9	0.0	0.1	4.9	3.1	33.6
Average	4.4%	0.4%	1.6%	10.8%	14.2%	16.3%
Median	0.0%	0.0%	2.0%	14.4%	15.9%	20.7%

Area	Corporate Trade Payment# 1984	1985	1986	Other Payments++ 1984	1985	1986
Boston	N/A	N/A	*	38.8%	20.5%	21.3%
New York	N/A	N/A	2.5%	29.5	47.6	59.4
Philadelphia	N/A	N/A	3.3	17.5	34.9	27.9
Pittsburgh	N/A	N/A	0.0	12.2	44.1	64.5
Washington, D.C.	N/A	N/A	0.5	13.9	5.7	40.9
Atlanta	N/A	N/A	0.6	16.0	24.3	14.9
Chicago	N/A	N/A	0.6	16.7	5.7	17.3
Cleveland	N/A	N/A	*	40.2	67.7	75.1
Detroit	N/A	N/A	0.9	80.4	89.8	95.7
Minneapolis/St. Paul	N/A	N/A	*	69.2	0.0	*
St. Louis	N/A	N/A	5.8	10.0	58.0	30.0
Dallas	N/A	N/A	0.0	29.4	100.0	61.4
Houston	N/A	N/A	*	0.0	28.0	*
Los Angeles	N/A	N/A	*	32.8	28.7	69.1
San Francisco	N/A	N/A	0.6	62.6	11.8	28.3
Denver	N/A	N/A	0.0	84.6	83.6	33.1
Average	N/A	N/A	0.8%	32.3%	43.6%	30.3%
Median	N/A	N/A	1.4%	16.3%	24.3%	33.8%

N/A — Not Available

TABLE 11

PERCENTAGE OF ACH CREDITS RECEIVED BY TYPE OF TRANSACTION BY AREA

Area	Payroll# 1986	Social Security+ 1986	Corporate Loan Payment± 1986	Corporate Trade Payment° 1986	Other Credits++ 1986
Boston	46.9%	15.9%	*	0.0%	37.2%
New York	43.5	46.0	0.0	0.1	10.5
Philadelphia	49.3	49.4	*	0.0	1.3
Pittsburgh	60.9	11.4	*	0.1	27.7
Washington, D.C.	56.4	30.0	0.6	0.8	12.3
Atlanta	37.3	49.0	1.6	0.5	11.7
Chicago	74.9	20.6	0.1	0.2	4.3
Cleveland	7.5	29.8	*	*	62.7
Detroit	33.3	64.3	*	0.0	2.4
Minneapolis/St. Paul	*	*	*	*	*
St. Louis	28.9	47.4	1.9	0.3	21.5
Dallas	22.8	36.0	*	*	41.2
Houston	*	*	*	*	*
Los Angeles	24.0	73.0	*	0.0	2.9
San Francisco	27.0	64.0	0.0	0.0	9.0
Denver	20.3	48.3	*	*	31.4
Average	40.3%	41.8%	0.6%	0.2%	17.1%
Median	46.3%	47.9%	0.7%	0.1%	11.4%

*No Respondents; #$\frac{Q28}{Q38}$ x 100; +$\frac{Q30}{Q38}$ x 100; ±$\frac{Q32}{Q38}$ x 100; °$\frac{Q34}{Q38}$ x 100; ++$\frac{Q36}{Q38}$ x 100.

3

AUTOMATED TELLER MACHINES (ATM) RESULTS

ATMs have been a component of the financial industry's delivery system since the late 1960s. The number of machines installed during the 1970s and the early 1980s grew at a rapid pace. However, for the past few years, the number of shipments of new ATMs by manufacturers has dropped and, in the mid-1980s, the earlier rise turned into a sharp decline. Several factors account for this downward trend.

First, many banks purchased ATMs for the purpose of installing them in existing locations in the place of earlier-generation machines. As the base of earlier-generation machines decreases, there are fewer institutions purchasing new machines.

Secondly, more and more banks are participating in shared regional and/or national ATM networks. Instead of installing machines in locations close to their competitors, many banks have joined networks and thus have given their customers added accessibility and convenience without making large capital expenditures for machines. The impact of banks joining networks has increased the monthly volume of interchange transaction per ATM by almost 50 percent over 1985 figures.

Finally, banks constantly try to justify the cost of their ATM networks. Usually it is difficult to show a cost reduction sufficient to justify the operating expenses of an ATM network as opposed to servicing that customer at the teller window. In fact, in some cases, the customer can be serviced more economically via the latter means. Some banks have tried to overcome this difference by charging a fee for the use of an ATM. The data for 1986 indicated that, for the first time since the survey was conducted, more than 50 percent of the respondents indicate they now charge their customers for ATM use. Bankers should keep in mind that, although it may be hard to cost-justify an ATM program, ATMs have become a way of life for many customers and the lack of a program could have a significant impact upon their market share. Banks with ATM programs typically profit not only from the benefits they provide their customers, such as allowing certain banking transactions to be performed 24 hours per day, seven days per week, but also from a possible reduction in the cost of branch construction, labor costs, and/or banking hours.

Strategies for placing ATMs are changing. Around the nation, experiments are taking place at branch offices consisting of only ATMs and/or cash dispensers or a combination of ATMs, cash dispensers, and a limited number of tellers. A greater number of cash dispensers are being installed and ATMs are being placed in nonbank locations.

All topics covered in this chapter are treated as comparisons made with prior years. One thing is certain: The configuration and philosophies of ATM programs have changed dramatically since the late 1960s.

ATM Transaction Mix

The types of transactions performed on ATMs is important to bankers responsible for ATM programs. Many bankers would like ATMs to replace lobby tellers, but many customers have been unwilling to accept ATMs as teller replacements.

Cash withdrawals and balance inquiries account for 84.8 percent of all proprietary ATM transactions and for 91.7 percent of all interchange ATM transactions. Many bankers would like to see much higher percentages of deposits than current ones, which are 10.5 percent of all proprietary ATM transactions and only 3.2 percent of interchange transactions. The fact remains that most users view ATMs as cash dispensers and information (balance) terminals. Transfers, bill payments, and other unspecified transactions accounted for the remaining transactions. Table 12 compares the transaction mix for proprietary and interchange transactions.

TABLE 12

ATM TRANSACTION MIX

Transaction	Proprietary	Interchange
Cash from checking	50.7%	58.9%
Cash from savings	11.0	11.9
Cash from credit card	1.1	1.6
Balance inquiries	22.0	19.3
Transfers	2.3	1.7
Deposits to checking	8.9	3.0
Deposits to savings	1.6	0.7
Bill payments	0.4	0.1
Other transactions	2.0	2.8

Table 12 indicates that users perform basically the same types of transactions at both proprietary and machines not belonging to their institutions. Customers typically use the machines for cash and to obtain a balance.

One interesting point is that the percentage of balance inquiries rose 0.8 percent for proprietary transactions and 1.8 percent for interchange transactions. Results show that 65.4 percent of respondents used ATMs to obtain a balance automatically with each transaction. Because of this automatic balance feature, one would expect balance inquiries to decrease and only customers needing to determine a balance to choose a withdrawal amount would select the balance inquiry. Since balance inquiries actually increased, many customers apparently do not understand how to use the machines and better educational programs are needed.

Average Dollar Volume per Transaction Type

The average checking account withdrawal from a proprietary ATM rose from $44 in 1985 to $50 in 1986, and the average credit card withdrawal increased from $58 to $65. Even though the percentage of deposits is considerably lower than that of withdrawals, the average dollar volumes per deposit have increased considerably. In 1986, checking deposits averaged $495, an increase from $422 in 1985; in 1986, average savings deposits were $529, compared to $466 in 1985. Although the number of deposits to total ATM transactions increased only 0.1 percent, customers using ATMs as depositories increased their average dollar value by 15.3 percent.

Dollar values of interchange transactions were lower for all transaction types except credit card withdrawals ($65 at proprietary machines and $73 at foreign locations). While dollar values for interchange transactions are smaller than for proprietary transactions, the average dollar value per interchange transaction rose in all categories from 1985 to 1986. Interchange withdrawals from checking accounts increased from $41 in 1985 to $45 in 1986. Credit card withdrawals rose the greatest amount: From $57 in 1985 to $73 in 1986. The average dollar amount deposited per checking deposit increased from $385 in 1985 to $469 in 1986 and the average savings deposit rose from $271 in 1985 to $322 in 1986.

Table 13 gives a comparison of average dollar values per transaction type between proprietary and interchange transactions.

TABLE 13

COMPARISON OF AVERAGE DOLLAR VALUES PER ATM TRANSACTION

Transaction Type	Proprietary	Interchange
Cash from checking	$ 54	$ 45
Cash from savings	52	48
Cash from credit card	65	73
Checking deposit	495	469
Savings deposit	529	322
Bill payments	240	208
All Transactions	$115	$ 65

Number of Transactions per ATM Unit per Month

One barometer of success for ATM installations is the average number of transactions per unit per month. Survey data reveal that, in 1986, in areas with no cash dispensers, the average full-function ATM performed 4,944 proprietary transactions per month and, where applicable, 1,141 interchange transactions per month. These amounts represented an increase of 18.5 percent in proprietary transactions and 49.7 percent in interchange volumes over those in 1985. This substantial rise in interchange volumes can be attributed to the growing number of banks participating in shared networks and the fact that more customers feel comfortable with and have confidence in using machines off their banks' premises.

In the case of ATMs accepting both interchange and proprietary transactions, the total number of transactions per month per ATM averaged 5,703. Table 14 compares proprietary with interchange averages per unit by type of transaction.

TABLE 14

COMPARISON OF ATM TRANSACTION VOLUMES
BY TYPE PER UNIT PER MONTH

Transaction Type	Proprietary	Interchange
Cash from checking	2,535	672
Cash from savings	487	136
Cash from credit card	68	18
Balance inquiries	985	221
Transfers	103	20
Checking deposits	437	35
Savings deposits	80	8
Bill payments	20	1
Other transactions	227	32
Total Transactions	4,944	1,141

Location Configuration

More than three-quarters (77.1 percent) of ATMs were installed in branch locations and another 5.3 percent in main office locations. Through-the-wall units made up 62.8 percent of total branch installations, while vestibule locations accounted for 20.9 percent. Main office units primarily were installed as through-the-wall (42.7 percent), lobby (31.4 percent), and in the vestibule (20.0 percent). Only 5.8 percent of main office ATM installations were located in drive-ups. Table 15 shows the main office and branch installation configurations of ATMs.

TABLE 15

ATM ON-PREMISE INSTALLATIONS

Type	Main Office	Branch	Total
Lobby	31.4%	9.7%	11.1%
Vestibule	20.0	20.9	20.9
Through-the-wall	42.7	62.8	61.5
Drive-up	5.8	6.6	6.5

Of all ATM units installed, 17.6 percent are located off-premise. Most off-premise ATMs are located in grocery/retail stores (28.3 percent), free standing units (16.6 percent), and office complexes (16.2 percent). Table 16 shows the mix of off-premise ATM locations.

TABLE 16

ATM OFF-PREMISE INSTALLATIONS

Installation Type	Percentage
Free-standing	16.6%
University/college	9.9
Shopping center	12.7
Grocery/retail store	28.3
Office complex	16.2
Hospital	7.2
Other	9.1

In contrast to ATMs, 94.9 percent of cash dispensers were placed in off-premise locations. All cash dispensers installed in main offices were located in the lobby. Of those installed at branch outlets, 50 percent were placed through-the-wall, 46.4 percent were installed in the lobby, and 3.6 percent were located in the drive-up. Table 17 shows the mix of cash dispenser on-premise installations.

TABLE 17

CASH DISPENSER ON-PREMISE INSTALLATIONS

Type of Location	Main Office	Branch	Total
Lobby	100.0%	46.4%	54.5%
Vestibule	0.0	0.0	0.0
Through-the-wall	0.0	50.0	42.4
Drive-up	0.0	3.6	3.0

Fully 82.9 percent—the vast majority—of cash dispensers in off-premise locations were placed in grocery/retail stores. Table 18 gives the breakdown of such installations.

TABLE 18

CASH DISPENSER OFF-PREMISE INSTALLATIONS

Type of Installation	Percentage
Free-standing	0.6%
University/college	1.4
Shopping center	3.1
Grocery/retail store	82.9
Office	4.7
Hospital	1.8
Other	5.5

Usage Patterns

1. Proprietary ATM Transactions

Knowing where transactions occur can help banks develop their reconfiguration strategies or new installation strategies. In all locations, including those of cash dispensers, an average of 4,024 proprietary transactions per month were made. Branch site proprietary ATM transactions averaged 4,300 per unit, while main office units averaged 3,901. The vestibule was the most popular installation type at both main office and branch locations. Table 19 shows the average number of transactions per unit by installation type for on-premise locations.

TABLE 19

AVERAGE PROPRIETARY TRANSACTIONS PER ON-PREMISE ATM PER MONTH

(By Installation Type)

Installation Type	Main Office	Branch
Lobby	2,838	1,661
Vestibule	5,732	4,902
Through-the-wall	4,022	4,589
Drive-up	3,074	4,021
Average	3,901	4,300

Off-premise ATM units averaged 1,605 proprietary transactions per unit per month. University/college campuses represented the most active off-premise ATM installations, averaging 5,445 transactions per unit per month. The next most active were free-standing units, with an average of 4,204 transactions per month, and shopping centers, with an average of 4,018 per month. Table 20 shows the average number of off-premise transactions by type of installation.

TABLE 20

AVERAGE PROPRIETARY TRANSACTIONS PER OFF-PREMISE ATM PER MONTH

(By Installation Type)

Installation Type	Number of Transactions
Free-standing	4,204
University/college	5,445
Shopping center	4,017
Grocery/retail	1,313
Office	1,922
Hospital	2,168
Other	3,327
Average	1,605

2. Interchange ATM Transactions

An average of 1,094 interchange transactions per month took place at financial institutions participating in shared networks.

The greatest number of such transactions, an average of 2,010 per month, occurred at off-premise locations. For branch ATMs and main office ATMs, these per-month averages were 999 and 917, respectively.

At main offices, foreign customers most frequently made transactions at vestibule-type installations—an average of 1,362 per month. The next most popular type with them was the drive-up, where they made 1,099 transactions. The drive-up also was the most popular type of branch installation, with 1,334 transactions per unit per month. Table 21 details the breakdown of main office and branch interchange transactions per ATM unit.

TABLE 21

AVERAGE INTERCHANGE TRANSACTIONS PER ON-PREMISE ATM PER MONTH

(By Installation Type)

Installation Type	Main Office	Branch
Lobby	636	308
Vestibule	1,362	1,064
Through-the-wall	925	1,066
Drive-up	1,099	1,334
Average	917	997

ATMs located at off-premise facilities averaged 1,094 interchange transactions per month. Grocery/retail store sites were the most often used, averaging 3,004 transactions per unit. Shopping center units came in a distant second, with 2,072 transactions per unit. Table 22 shows the breakdown of off-premise ATM usage.

TABLE 22

AVERAGE INTERCHANGE TRANSACTIONS PER OFF-PREMISE ATM PER MONTH

(By Installation Type)

Installation Type	Number of Transactions
Free-standing	1,818
University/college	1,320
Shopping center	2,072
Grocery/retail store	3,004
Office complex	1,076
Hospital	951
Other	1,085
Average	1,094

3. Proprietary Cash Dispenser Transactions

An average of 1,720 proprietary transactions per month occurred at cash dispenser units during 1986. The most active cash dispenser installation in this case was the branch, where an average of 3,963 proprietary transactions per month were made. Table 23 shows the average number of proprietary on-premise cash dispenser transactions by installation type.

TABLE 23

AVERAGE PROPRIETARY TRANSACTIONS PER ON-PREMISE CASH DISPENSER PER MONTH

(By Installation Type)

Installation Type	Main Office	Branch
Lobby	1,292	3,963
Vestibule	0	0
Through-the-wall	0	5,000
Drive-up	0	1,413
Average	1,292	3,963

The most active cash dispenser locations for proprietary transactions were shopping centers and free-standing units where transactions per month averaged 2,788 and 2,032, respectively. Table 24 shows transaction volumes of off-premise proprietary cash dispenser by installation type.

TABLE 24

AVERAGE PROPRIETARY TRANSACTIONS PER OFF-PREMISE CASH DISPENSER PER MONTH

(By Installation Type)

Installation Type	Number of Transactions
Free-standing	2,032
University/college	459
Shopping center	2,788
Grocery/retail	1,318
Office complex	1,478
Hospital	1,686
Other	579
Average	1,537

4. Interchange Cash Dispenser Transactions

Cash dispensers accepting interchange transactions averaged 1,840 proprietary and interchange transactions per unit per month. At such units, off-premise interchange transactions exceeded those made at on-premise facilities by more than a 3 to 1 ratio. Main office cash dispensers averaged only 97 interchange transactions per month while branch cash dispensers averaged 573 per month. By contrast, an average of 1,940 interchange transactions took place at each off-premise cash dispenser. Table 25 shows the average number of interchange transactions by on-premise installation.

TABLE 25

AVERAGE INTERCHANGE TRANSACTIONS PER ON-PREMISE CASH DISPENSER PER MONTH

(By Installation Type)

Installation Type	Main Office	Branch
Lobby	97	455
Vestibule	0	0
Through-the-wall	0	695
Drive-up	0	75
Average	97	572

The university/college campus was the most active cash dispenser location for interchange transactions, with an average of 3,095 transactions per unit. Grocery/retail stores were the next most active for such transactions, with an average of 2,203. Table 26 details the average interchange transactions per off-premise cash dispenser location.

TABLE 26

AVERAGE INTERCHANGE TRANSACTIONS PER OFF-PREMISE CASH DISPENSER PER MONTH

(By Installation Type)

Installation Type	Number of Transactions
Free-standing	176
University/college	3,095
Shopping center	1,858
Grocery/retail store	2,203
Office complex	1,013
Hospital	1,553
Other	2,353
Average	1,940

Installation Plans

Survey data indicate that some banks will add, replace, and/or redeploy their existing machines to other locations during 1987. Table 27 shows the installation plans of those banks that reported they would make changes during 1987.

TABLE 27

ATM INSTALLATION PLANS BY TYPE OF CHANGE

Number of Respondents	Planned Change	Number of Units
24	New machine, same location	346
40	Remove old, place in another site	228
94	New machine, new location	847

Respondents indicated that 70.8 percent of new ATMs would be placed in branch locations and 25.7 percent in off-premise locations. Only 3.5 percent of the planned installations will be in the main offices. These plans are similar to those of last year, as Table 28 shows.

TABLE 28

ATM INSTALLATION PLANS BY LOCATION

Location	1985	1986	1987
Main office	1.5%	1.4%	3.5%
Branch office	51.9	71.8	70.8
Off-premise	46.6	26.5	25.7

On the other hand, cash dispensers will be installed almost entirely in off-premise locations. Twenty-five respondents reported they plan to install 167 cash dispensers, of which 97.6 percent will be in off-premise locations. Of these, 46.7 percent will be installed in grocery/retail stores. Only 2.4 percent of these units are planned for branch offices and none for main offices. These installation plans represent little change from 1986 plans.

ATM On-Line Status

Nearly all respondents said their ATMs and cash dispensers operate on-line. Only 3.0 percent of such units operate off-line. This finding reflects the great fraud and overdraft protection afforded by operating on-line as well as the large number of shared networks requiring on-line capability.

Service Charges

Pricing of ATM use is always an issue. Some banks charge, while others do not. There are different strategies and reasons that help institutions determine whether or not to charge for ATM use. In general, at some institutions, there is a belief that free ATM use is an incentive for the customer to handle their transactions in this manner. Other banks do charge because they believe in value pricing and that customers should be willing to pay for the added convenience of 24-hour, seven-day-a-week access to their accounts.

For the first time since this survey has been conducted, more than half the respondents indicated they charge customers for ATM use. The data indicated that 53.7 percent of the respondents charge their customers, up from 46.3 percent in 1985. Of those who indicated they currently were not charging their customers, 21.0 percent said they do plan to impose a charge in 1987.

Of those banks that charge, 27.8 percent utilize a per-transaction fee. Another 27.8 percent charge a fee only if the customer falls below a specified minimum balance. Still another 15.3 percent indicated they charge only for interchange transactions.

In making a comparison of ATMs with DDA paper items, it can be noted that 41.8 percent of respondents said they charge less for an ATM transaction than for a paper transaction; 38.0 percent charge the same for both paper and ATMs, and 20.2 percent charge more for an ATM transaction than for paper.

Active Proprietary ATM Access Cards

The percentage of active (used at least once per month) ATM access cards dropped slightly, to 50.3 percent in 1986 from 51.5 percent in 1985. This change can be attributed to the changes many institutions made in strategies related to their card issuance policies. For instance, an effort to increase card base by issuing cards to a larger number of customers, without regard to demographic patterns, could erode the active to inactive ratio. At the same time, such a strategy could lead to a higher active percentage and user base in the long run. The theory here is first to put a card in the customer's hand, and then give him/her an incentive to use it.

TABLE 29

PERCENTAGE OF PROPRIETARY ATM TRANSACTIONS BY TYPE BY AREA

Area	Cash Withdrawals from Checking+			Cash Withdrawals from Savings±		
	1984	1985	1986	1984	1985	1986
Boston	47.9%	46.4%	46.8%	12.5%	11.7%	12.4%
New York	40.9	43.7	37.3	10.9	11.1	13.6
Philadelphia	45.7	51.0	53.1	14.8	12.9	11.5
Pittsburgh	57.0	51.3	46.6	6.2	11.4	16.0
Washington, D.C.	48.1	53.7	53.5	5.3	5.8	9.2
Atlanta	58.9	49.8	60.7	5.9	4.8	7.0
Chicago	49.8	53.8	53.8	8.8	7.3	10.5
Cleveland	39.2	38.8	47.4	12.5	11.8	13.8
Detroit	44.8	27.8	14.6	11.2	7.7	32.9
Minneapolis/St. Paul	62.3	57.3	57.7	7.3	7.7	8.5
St. Louis	54.7	49.3	57.7	5.4	6.1	5.1
Dallas	57.8	61.9	56.4	3.6	4.0	11.1
Houston	62.2	69.0	72.1	6.3	1.3	0.9
Los Angeles	60.2	62.9	59.6	4.6	5.7	6.6
San Francisco	64.0	62.1	64.4	7.2	9.5	6.4
Denver	31.8	7.2	48.7	14.1	0.3	9.5
Average	50.3%	48.4%	50.7%	8.5%	8.4%	11.0%
Median	53.8%	53.3%	55.7%	7.8%	7.5%	8.7%

*No respondents; $\frac{+Q47}{Q56}$ x 100; $\frac{\pm Q48}{Q56}$ x 100; $\frac{\S Q49}{Q56}$ x 100; $\frac{{}^{\circ}Q50}{Q56}$ x 100;

$\frac{\#Q51}{Q56}$ x 100; $\frac{{+}{+}Q52}{Q56}$ x 100; $\frac{\S\S Q53}{Q56}$ x 100; $\frac{{}^{\circ\circ}Q54}{Q56}$ x 100; $\frac{\#\#Q55}{Q56}$ x 100.

Note: These footnotes also pertain to the continuation of Table 29 on the following pages.

TABLE 29 (Continued)

Area	Cash Withdrawals From Credit Cards§			Balance Inquiries°		
	1984	1985	1986	1984	1985	1986
Boston	0.2%	0.2%	0.5%	24.1%	25.8%	29.9%
New York	0.8	1.4	1.2	32.3	29.3	28.5
Philadelphia	1.0	0.5	1.1	15.6	16.8	17.2
Pittsburgh	0.0	0.8	0.6	9.4	24.3	18.6
Washington, D.C.	1.2	2.2	1.5	23.5	23.4	20.7
Atlanta	0.8	0.8	1.2	23.2	21.1	18.8
Chicago	0.2	0.7	0.2	17.4	10.2	18.6
Cleveland	0.5	0.6	1.4	24.6	21.5	21.7
Detroit	0.3	0.2	0.1	22.8	19.2	36.6
Minneapolis/St. Paul	0.0	0.0	1.5	15.3	14.6	16.1
St. Louis	1.7	1.5	1.5	24.6	24.2	21.8
Dallas	0.3	0.3	1.0	21.6	23.5	21.7
Houston	0.0	0.0	*	23.0	24.1	21.9
Los Angeles	1.1	0.6	0.9	17.5	17.5	20.1
San Francisco	1.9	2.2	1.5	16.3	13.8	15.5
Denver	8.9	0.0	2.0	10.4	26.5	27.4
Average	1.1%	0.9%	1.1%	22.7%	21.2%	22.0%
Median	0.4%	0.3%	1.0%	19.6%	18.7%	20.0%

Area	Transfers #			Checking Deposits++		
	1984	1985	1986	1984	1985	1986
Boston	2.2%	1.7%	2.4%	10.0%	11.3%	11.1%
New York	2.9	3.4	3.3	9.2	8.5	7.6
Philadelphia	5.2	3.1	2.3	14.2	11.6	10.9
Pittsburgh	1.4	1.2	3.0	19.2	9.0	9.8
Washington, D.C.	2.3	2.3	2.8	8.9	11.1	10.3
Atlanta	1.4	1.6	1.4	8.5	6.9	8.4
Chicago	3.7	3.4	3.7	12.7	9.7	10.1
Cleveland	1.9	1.6	1.4	13.3	9.4	8.3
Detroit	2.9	2.7	4.7	14.1	10.3	4.8
Minneapolis/St. Paul	3.1	3.3	3.4	11.0	15.5	11.4
St. Louis	1.9	1.5	2.0	9.5	7.8	9.3
Dallas	1.6	0.9	1.0	14.2	8.6	6.9
Houston	1.5	0.7	0.5	6.9	4.8	4.5
Los Angeles	2.8	1.2	1.1	11.3	10.8	9.5
San Francisco	1.5	1.8	1.9	8.5	6.4	9.3
Denver	2.5	1.4	1.7	20.3	1.5	6.5
Average	2.4%	2.0%	2.3%	10.5%	9.0%	8.9%
Median	2.1%	1.9%	1.9%	10.6%	10.3%	9.5%

TABLE 29 (Continued)

Area	Savings Deposits§§			Bill Payments°°		
	1984	1985	1986	1984	1985	1986
Boston	2.2%	2.0%	2.4%	0.3%	0.4%	0.5%
New York	2.3	2.0	2.2	0.4	0.5	0.4
Philadelphia	1.2	2.4	2.2	0.4	0.7	0.2
Pittsburgh	1.3	1.4	2.7	0.4	0.3	0.5
Washington, D.C.	0.7	0.9	1.2	0.5	0.5	0.4
Atlanta	0.4	0.4	0.6	0.2	0.2	0.2
Chicago	2.0	1.5	1.9	1.3	1.0	1.3
Cleveland	2.9	2.2	1.7	2.4	1.3	0.9
Detroit	2.1	1.8	6.0	1.1	0.9	0.9
Minneapolis/St. Paul	0.8	1.7	1.4	0.4	0.0	*
St. Louis	0.7	0.8	0.6	0.4	0.2	0.4
Dallas	0.5	0.3	0.8	0.4	0.3	0.4
Houston	0.2	0.1	0.1	0.0	0.1	0.0
Los Angeles	0.4	0.5	0.6	0.5	0.3	0.4
San Francisco	0.4	2.4	0.5	0.1	0.1	0.1
Denver	9.5	0.1	0.5	0.3	0.2	0.2
Average	1.4%	1.4%	1.6%	0.5%	0.5%	0.4%
Median	0.8%	0.8%	0.9%	0.3%	0.3%	0.3%

Area	Other ATM Transactions##		
	1984	1985	1986
Boston	0.7%	0.6%	0.1%
New York	0.3	0.1	5.8
Philadelphia	2.0	1.1	1.5
Pittsburgh	5.0	0.3	2.1
Washington, D.C.	9.6	0.1	0.4
Atlanta	0.7	0.4	1.6
Chicago	4.0	12.4	0.1
Cleveland	2.8	3.0	3.4
Detroit	0.7	1.5	0.4
Minneapolis/St. Paul	0.0	0.0	*
St. Louis	1.1	8.5	1.6
Dallas	0.1	0.2	0.7
Houston	0.0	0.0	*
Los Angeles	1.5	0.8	1.1
San Francisco	0.1	0.0	0.5
Denver	2.2	0.1	3.6
Average	2.6%	1.3%	2.0%
Median	0.0%	0.0%	0.4%

TABLE 30

PERCENTAGE OF INTERCHANGE ATM TRANSACTIONS BY TYPE BY AREA

Area	Cash Withdrawals from Checking+			Cash Withdrawals from Savings±			Cash Withdrawals from Credit Cards§		
	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	60.0%	55.5%	50.3%	13.7%	14.8%	14.5%	0.1%	0.6%	0.7%
New York	44.8	56.4	56.0	8.9	7.4	6.4	1.9	1.6	2.2
Philadelphia	50.9	51.3	52.5	9.3	18.2	18.1	9.9	1.1	1.8
Pittsburgh	63.9	56.0	52.4	12.6	14.2	16.4	0.0	0.8	0.9
Washington, D.C.	77.4	71.8	68.1	9.4	9.9	11.8	1.3	5.1	4.6
Atlanta	71.6	41.0	73.1	5.6	5.2	7.0	1.1	1.3	0.7
Chicago	56.0	50.2	64.9	8.6	6.3	10.4	0.0	0.2	0.7
Cleveland	46.7	29.7	34.5	13.7	9.6	11.2	0.5	0.6	4.6
Detroit	71.8	23.7	20.3	8.9	14.1	42.3	0.2	0.4	0.6
Minneapolis/St. Paul	88.6	71.7	63.6	2.7	12.3	11.1	0.0	6.0	2.2
St. Louis	70.2	73.1	64.2	1.9	5.5	9.0	0.6	2.0	2.5
Dallas	67.1	66.0	54.6	10.3	8.9	11.0	0.9	1.1	1.3
Houston	65.0	78.1	82.1	6.1	2.6	2.6	13.3	0.6	0.7
Los Angeles	72.2	45.6	62.3	4.2	10.8	15.1	1.2	3.7	3.0
San Francisco	71.3	30.5	56.7	11.4	6.0	12.9	1.1	0.2	1.9
Denver	23.9	8.4	50.5	12.3	0.0	7.1	6.2	2.1	1.6
Average	59.7%	45.2%	58.9%	9.0%	10.1%	11.9%	2.7%	1.2%	1.6%
Median	60.0%	60.0%	64.8%	10.0%	10.0%	12.0%	0.0%	0.0%	1.6%

*No Respondents; $\frac{{}^{+}Q63}{Q72}$ x 100; $\frac{{}^{\pm}Q64}{Q72}$ x 100; $\frac{{}^{\S}Q65}{Q72}$ x 100; $\frac{{}^{\circ}Q66}{Q72}$ x 100; $\frac{{}^{\#}Q67}{Q72}$ x 100; $\frac{{}^{++}Q68}{Q72}$ x 100; $\frac{{}^{\S\S}Q69}{Q72}$ x 100; $\frac{{}^{\circ\circ}Q70}{Q72}$ x 100; $\frac{{}^{\#\#}Q71}{Q72}$ x 100.

Note: These footnotes also pertain to the continuation of Table 30 on the following page.

TABLE 30 (Continued)

Area	Balance Inquiries°			Transfers #			Checking Deposits++		
	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	21.4%	23.4%	30.9%	1.5%	1.5%	1.0%	2.7%	3.5%	2.1%
New York	30.2	31.6	29.1	0.6	0.2	0.1	0.0	0.4	0.4
Philadelphia	15.0	15.2	17.4	1.2	1.6	1.3	6.1	5.3	3.8
Pittsburgh	9.4	19.6	14.9	0.0	1.4	1.4	0.0	6.6	4.9
Washington, D.C.	11.3	12.8	12.1	0.1	0.0	*	0.5	0.5	*
Atlanta	12.6	13.6	16.8	0.3	0.3	0.6	0.3	0.5	0.6
Chicago	14.7	12.2	9.2	2.7	2.2	1.7	13.0	9.8	11.8
Cleveland	18.0	23.8	22.8	1.3	1.4	17.0	13.2	8.1	7.8
Detroit	0.0	6.7	11.6	2.6	1.5	8.7	15.5	5.2	5.2
Minneapolis/St. Paul	2.0	8.8	7.9	0.6	1.2	1.2	6.0	0.0	12.1
St. Louis	16.7	7.7	18.2	0.6	1.6	1.0	9.8	9.0	4.7
Dallas	18.8	23.8	25.8	0.6	0.2	0.9	2.2	0.0	5.5
Houston	15.1	18.7	14.5	0.5	0.0	0.2	0.0	0.0	*
Los Angeles	9.2	31.9	13.0	0.3	1.1	0.1	3.2	5.1	0.5
San Francisco	13.6	6.7	17.7	0.5	0.3	1.3	2.0	0.0	0.1
Denver	14.4	19.5	18.5	3.1	0.8	1.1	15.4	1.2	6.3
Average	14.6%	17.5%	19.3%	1.2%	1.0%	1.7%	6.7%	3.8%	3.0%
Median	10.0%	20.0%	14.7%	0.0%	0.0%	1.0%	0.0%	0.0%	7.0%

Area	Savings Deposits§§			Bill Payments°°			Other ATM Transactions		
	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	0.6%	0.7%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	*
New York	0.0	0.0	0.1	0.0	0.0	*	0.0	0.0	5.8
Philadelphia	0.6	1.4	0.9	0.0	0.0	0.0	6.9	5.9	4.2
Pittsburgh	0.0	1.4	1.1	0.0	0.0	*	14.1	0.0	7.9
Washington, D.C.	0.0	0.0	*	0.0	0.0	*	0.0	0.0	3.3
Atlanta	0.0	0.0	0.1	0.0	0.0	0.1	8.6	1.2	1.0
Chicago	1.5	1.1	1.3	0.0	0.0	0.1	3.5	3.2	*
Cleveland	2.3	1.7	2.2	0.0	0.0	*	4.3	0.0	*
Detroit	1.0	1.5	6.4	0.0	0.0	0.2	0.0	2.7	4.7
Minneapolis/St. Paul	1.0	0.0	1.8	0.0	0.0	*	0.0	0.0	*
St. Louis	1.0	1.0	0.4	0.0	0.0	0.0	0.0	0.0	*
Dallas	2.0	0.0	0.4	0.0	0.0	0.3	0.0	0.0	0.2
Houston	0.0	0.0	*	0.0	0.0	*	0.0	0.0	*
Los Angeles	0.0	0.6	*	0.0	1.2	*	9.7	0.0	4.0
San Francisco	0.1	1.4	*	0.0	0.0	*	0.0	0.0	9.3
Denver	10.0	0.0	0.4	0.0	0.0	0.1	14.6	3.8	14.4
Average	1.2%	0.8%	0.7%	0.0%	0.1%	0.1%	4.6%	1.5%	2.8%
Median	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	13.1%

TABLE 31

AVERAGE DOLLAR VALUE OF PROPRIETARY ATM TRANSACTIONS BY AREA

Area	Cash Withdrawals from Checking+			Cash Withdrawals from Savings±		
	1984	1985	1986	1984	1985	1986
Boston	$59	$59	$55	$51	$52	$56
New York	72	68	66	72	70	65
Philadelphia	58	55	60	56	58	63
Pittsburgh	52	47	50	50	42	53
Washington, D.C.	46	33	47	54	55	51
Atlanta	40	38	43	47	49	49
Chicago	54	49	51	66	58	54
Cleveland	50	48	43	49	47	42
Detroit	53	55	53	48	64	46
Minneapolis/St. Paul	34	*	*	34	*	*
St. Louis	42	41	42	50	49	58
Dallas	32	33	46	41	44	57
Houston	41	34	39	54	52	45
Los Angeles	56	32	52	116	55	61
San Francisco	44	29	46	46	30	49
Denver	37	37	38	25	37	53
Average	$50	$44	$50	$56	$52	$54
Median	$48	$48	$47	$51	$52	$52

*No respondents; +$\frac{Q57}{Q47}$; ±$\frac{Q58}{Q48}$; §$\frac{Q59}{Q49}$; °$\frac{Q60}{Q52}$; #$\frac{Q61}{Q53}$; ±±$\frac{Q62}{Q54}$.

Note: These footnotes also pertain to the continuation of Table 31 on the following page.

TABLE 31 (Continued)

	Cash Withdrawals from Credit Cards§§			Checking Deposits°		
Area	1984	1985	1986	1984	1985	1986
Boston	$ 74	$ 71	$ 72	$315	$387	$516
New York	78	79	84	526	863	640
Philadelphia	65	67	59	469	376	629
Pittsburgh	0	57	40	512	417	441
Washington, D.C.	64	93	53	360	330	401
Atlanta	61	58	64	335	349	459
Chicago	65	72	70	527	698	740
Cleveland	57	60	55	365	379	405
Detroit	54	57	54	401	427	334
Minneapolis/St. Paul	*	*	*	404	*	*
St. Louis	37	48	57	362	176	327
Dallas	12	10	52	342	340	504
Houston	0	0	*	332	449	537
Los Angeles	60	57	80	288	332	515
San Francisco	43	31	53	2900	387	498
Denver	24	43	62	123	373	285
Average	$ 53	$ 58	$ 65	$523	$422	$495
Median	$ 62	$ 63	$ 64	$ 48	$ 47	$442

	Savings Deposits #			Bill Payments±±		
Area	1984	1985	1986	1984	1985	1986
Boston	$265	$236	$610	$170	$152	$227
New York	437	372	883	298	219	271
Philadelphia	293	390	496	229	174	283
Pittsburgh	188	290	392	173	221	227
Washington, D.C.	423	480	395	97	90	146
Atlanta	458	396	330	188	303	475
Chicago	564	681	623	143	385	154
Cleveland	229	238	216	151	142	155
Detroit	214	394	422	428	516	166
Minneapolis/St. Paul	526	*	*	204	*	*
St. Louis	335	294	471	149	363	169
Dallas	295	267	785	35	32	124
Houston	83	164	197	99	413	162
Los Angeles	669	382	383	168	157	369
San Francisco	361	81	470	111	301	274
Denver	45	261	211	223	175	221
Average	$310	$466	$529	$175	$230	$240
Median	$ 51	$ 52	$347	$ 65	$ 66	$226

TABLE 32

AVERAGE DOLLAR VALUE OF INTERCHANGE ATM TRANSACTIONS BY AREA

Area	Cash Withdrawals from Checking+			Cash Withdrawals from Savings±			Cash Withdrawals from Credit Cards§		
	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	$ 52	$ 54	$ 51	$ 46	$ 55	$ 50	$ 49	$ 73	$ 65
New York	50	38	68	44	31	64	79	87	100
Philadelphia	56	51	52	48	54	53	54	65	83
Pittsburgh	37	37	46	34	39	46	100	64	64
Washington, D.C.	43	43	40	43	46	47	35	62	62
Atlanta	34	37	37	37	41	40	52	43	82
Chicago	46	43	42	72	43	52	63	94	79
Cleveland	42	37	41	48	38	45	59	79	52
Detroit	47	47	49	58	49	52	65	65	75
Minneapolis/St. Paul	32	*	*	33	*	*	*	*	*
St. Louis	40	36	36	43	31	44	57	22	55
Dallas	39	37	39	28	17	40	53	60	46
Houston	43	36	33	69	55	36	97	77	106
Los Angeles	78	57	46	74	58	56	22	63	91
San Francisco	58	*	41	70	*	45	58	*	96
Denver	58	*	40	29	*	54	54	*	61
Average	$ 45	$ 41	$ 45	$ 45	$ 43	$ 48	$ 54	$ 57	$ 73
Median	$ 43	$ 44	$ 43	$ 46	$ 46	$ 46	$ 55	$ 67	$ 74

Area	Checking Deposits°			Savings Deposits #			Bill Payments++		
	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	$273	$414	$367	$246	$434	$290	$ *	$163	$192
New York	*	266	264	*	*	264	*	*	*
Philadelphia	381	412	453	367	334	361	135	242	345
Pittsburgh	*	272	380	*	256	325	*	*	121
Washington, D.C.	378	568	*	*	*	*	62	*	*
Atlanta	423	282	4020	165	198	471	156	*	218
Chicago	442	483	498	401	359	526	*	221	239
Cleveland	290	254	313	234	214	158	82	151	*
Detroit	413	420	425	344	336	360	*	259	494
Minneapolis/St. Paul	545	*	*	527	*	*	*	*	*
St. Louis	397	322	424	412	43	284	96	173	150
Dallas	458	*	378	280	*	301	*	*	139
Houston	*	*	*	*	*	*	*	*	*
Los Angeles	1195	431	456	*	525	*	*	178	*
San Francisco	350	409	582	10	*	602	*	*	*
Denver	58	*	303	30	*	207	*	*	166
Average	$342	$385	$469	$167	$271	$322	$109	$180	$208
Median	$ 37	$ 36	$405	$ 39	$ 39	$281	$ 22	$ 22	$191

*No respondents; +$\frac{Q73}{Q63}$ x 100; ±$\frac{Q74}{Q64}$ x 100; §$\frac{Q75}{Q65}$ x 100; °$\frac{Q76}{Q68}$ x 100; #$\frac{Q77}{Q69}$ x 100; ++$\frac{Q78}{Q70}$ x 100.

TABLE 33

AVERAGE MONTHLY PROPRIETARY TRANSACTIONS PER ATM UNIT BY AREA

Area	Cash Withdrawals from Checking+			Cash Withdrawals from Savings±		
	1984	1985	1986	1984	1985	1986
Boston	2,329.3	2,015.2	2,138.2	610.3	506.5	627.7
New York	1,924.3	2,504.8	2,426.4	557.1	639.7	840.7
Philadelphia	2,094.9	1,841.0	2,536.5	563.6	466.0	608.6
Pittsburgh	3,098.6	2,282.6	2,213.4	335.6	507.0	758.5
Washington, D.C.	3,706.3	1,750.7	3,062.7	378.0	187.5	541.3
Atlanta	2,890.7	2,517.7	2,682.5	290.6	193.9	327.1
Chicago	1,651.7	1,992.4	1,666.1	293.1	269.1	332.9
Cleveland	2,688.4	2,120.2	2,368.3	855.9	645.5	690.1
Detroit	1,149.4	567.7	1,746.3	286.7	157.4	657.8
Minneapolis/St. Paul	889.3	2,197.1	1,713.8	104.1	293.3	251.8
St. Louis	2,279.6	2,066.2	2,573.1	225.9	242.6	226.6
Dallas	2,777.1	2,420.0	2,790.2	173.1	155.2	547.7
Houston	2,079.0	2,046.6	1,927.5	208.7	37.8	24.3
Los Angeles	3,098.1	3,291.6	3,533.3	234.9	297.1	391.8
San Francisco	3,165.0	2,414.9	2,094.5	356.6	369.8	215.7
Denver	1,815.4	304.1	1,973.6	803.6	13.7	401.3
Average	2,351.8	2,018.6	2,534.9	392.4	345.6	487.0
Median	2,388.0	1,889.0	2,286.9	315.0	238.7	352.7

*No respondents; $\frac{+Q47}{Q94}$; $\frac{\pm Q48}{Q94}$; $\frac{\S Q49}{Q94}$; $\frac{°Q50}{Q94}$;

$\frac{\#Q51}{Q94}$; $\frac{++Q52}{Q94}$; $\frac{\S\S Q53}{Q94}$; $\frac{°°Q54}{Q94}$; $\frac{\#\#Q55}{Q94}$; $\frac{***Q56}{Q94}$.

Note: These footnotes also pertain to the continuation of Table 33 on the following pages.

TABLE 33 (Continued)

Area	Cash Withdrawals from Credit Cards§§			Balance Inquiries°		
	1984	1985	1986	1984	1985	1986
Boston	8.6	8.4	45.6	1,170.4	1,117.9	1,093.4
New York	51.0	82.0	99.3	1,580.6	1,682.6	1,758.2
Philadelphia	30.4	18.2	61.2	827.1	607.4	819.6
Pittsburgh	0.0	34.7	29.1	513.4	1,080.0	884.6
Washington, D.C.	84.9	72.9	101.8	1,534.7	761.9	1,056.0
Atlanta	37.7	44.0	63.5	1,139.1	1,052.5	832.2
Chicago	7.7	25.4	13.0	576.4	376.4	815.3
Cleveland	32.1	32.1	67.7	1,689.0	1,173.5	1,082.8
Detroit	8.6	3.2	10.6	585.0	391.6	711.9
Minneapolis/St. Paul	0.0	0.0	69.4	218.6	558.8	478.4
St. Louis	69.4	65.3	67.4	1,026.0	1,024.6	970.3
Dallas	13.3	11.7	100.6	1,040.1	918.9	1,076.3
Houston	0.0	0.0	*	764.1	715.6	585.1
Los Angeles	57.9	30.0	72.5	903.0	914.0	1,193.7
San Francisco	94.3	87.1	54.6	804.4	536.9	490.5
Denver	510.0	0.1	93.7	595.7	1,121.7	1,111.3
Average	62.9	37.1	64.4	935.5	880.9	985.4
Median	12.0	8.0	46.1	801.0	618.6	706.4

Area	Transfers #			Checking Deposits++		
	1984	1985	1986	1984	1985	1986
Boston	105.9	73.7	109.4	484.3	490.4	505.5
New York	161.1	193.5	204.4	497.1	488.3	469.4
Philadelphia	119.6	111.3	112.1	492.9	418.0	520.3
Pittsburgh	78.4	52.3	141.4	1,043.6	402.3	467.2
Washington, D.C.	166.3	76.4	150.5	635.6	361.5	564.6
Atlanta	68.1	80.0	66.3	419.1	362.0	372.0
Chicago	121.7	126.1	116.5	419.1	359.5	312.7
Cleveland	131.6	89.8	71.7	910.3	512.1	414.3
Detroit	73.7	55.4	121.4	360.4	210.1	573.7
Minneapolis/St. Paul	44.1	125.1	100.3	156.4	592.6	338.4
St. Louis	80.1	63.2	90.7	396.4	315.3	415.0
Dallas	76.3	35.1	51.6	681.4	336.6	340.6
Houston	49.3	19.6	13.5	228.4	141.0	118.9
Los Angeles	146.6	60.7	66.6	584.1	563.0	566.1
San Francisco	75.4	70.1	58.9	420.0	250.8	301.8
Denver	143.1	58.0	67.0	1,158.0	63.9	262.9
Average	102.6	82.8	103.3	555.5	376.4	437.1
Median	81.4	56.8	64.6	453.4	362.9	376.8

TABLE 33 (Continued)

Area	Savings Deposits§§ 1984	Savings Deposits§§ 1985	Savings Deposits§§ 1986	Bill Payments°° 1984	Bill Payments°° 1985	Bill Payments°° 1986
Boston	106.7	85.7	120.0	14.6	18.2	22.9
New York	123.0	114.8	143.9	23.6	27.6	24.8
Philadelphia	96.4	86.0	118.1	24.4	25.0	12.7
Pittsburgh	71.6	63.7	130.7	21.4	11.8	22.1
Washington, D.C.	40.7	30.3	70.6	31.3	15.6	25.9
Atlanta	21.4	17.4	25.5	9.0	8.7	9.7
Chicago	66.9	56.6	61.2	42.9	37.2	46.6
Cleveland	198.4	120.9	84.5	162.4	73.5	45.7
Detroit	54.4	37.2	119.6	27.9	17.5	22.4
Minneapolis/St. Paul	10.7	65.4	42.1	5.6	0.0	0.0
St. Louis	27.4	30.0	25.7	18.4	8.6	22.8
Dallas	22.7	10.6	37.5	18.9	12.5	34.3
Houston	5.6	3.4	3.2	1.3	1.6	0.3
Los Angeles	22.7	23.6	35.8	24.9	14.3	24.1
San Francisco	20.1	92.1	16.5	5.6	5.0	4.0
Denver	540.0	3.1	22.2	16.3	6.5	9.5
Average	89.3	60.4	69.3	28.0	20.6	20.4
Median	30.0	28.1	31.3	11.1	9.6	10.5

Area	Other ATM Transactions## 1984	Other ATM Transactions## 1985	Other ATM Transactions## 1986	Total ATM Transactions*** 1984	Total ATM Transactions*** 1985	Total ATM Transactions*** 1986
Boston	36.0	23.9	14.4	4,866.0	4,340.0	4,678.2
New York	21.9	3.8	699.9	5,154.0	5,737.1	6,667.1
Philadelphia	159.0	39.3	266.6	4,410.0	3,612.1	5,005.7
Pittsburgh	271.7	14.5	195.7	5,434.3	4,448.8	4,842.6
Washington, D.C.	849.9	2.4	63.7	7,427.1	3,259.1	5,637.1
Atlanta	35.1	18.6	121.1	4,910.6	5,052.7	4,499.9
Chicago	134.1	457.0	26.0	3,313.7	3,700.0	3,390.4
Cleveland	194.6	166.6	410.3	6,863.1	5,470.1	5,235.3
Detroit	17.1	30.9	51.3	2,563.3	2,043.7	4,335.4
Minneapolis/St. Paul	0.0	0.0	0.0	1,428.4	3,832.3	2,994.3
St. Louis	44.6	373.1	186.4	4,168.3	4,188.9	4,577.9
Dallas	3.4	8.9	47.2	4,806.4	3,910.1	5,025.9
Houston	0.0	0.0	0.0	3,327.0	2,965.6	2,672.8
Los Angeles	77.1	39.7	161.4	5,149.7	5,234.0	6,045.2
San Francisco	4.3	1.9	34.6	4,945.7	3,890.8	3,271.1
Denver	128.1	6.0	1,066.7	5,709.0	4,227.7	5,008.2
Average	123.6	53.9	226.7	4,654.8	4,172.0	4,943.5
Median	0.0	0.0	20.8	4,493.6	3,869.1	4,164.5

TABLE 34

AVERAGE MONTHLY INTERCHANGE TRANSACTIONS PER ATM UNIT BY AREA

Area	Cash Withdrawals Checking+			Cash Withdrawals Savings±			Cash Withdrawals Credit Cards§		
	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	192.0	253.5	597.8	43.7	67.3	196.7	0.4	2.6	9.4
New York	17.6	269.7	711.4	3.4	3.5	119.0	0.9	7.7	42.0
Philadelphia	713.1	878.6	1,081.2	130.7	311.7	417.0	138.9	19.2	40.4
Pittsburgh	656.6	1,074.8	1,690.3	129.0	272.9	529.8	0.0	14.7	29.7
Washington, D.C.	222.0	169.8	495.2	25.7	23.3	95.8	3.9	12.0	46.5
Atlanta	247.3	302.2	1,083.7	19.3	37.0	119.6	0.9	10.5	16.0
Chicago	1,034.6	996.6	1,805.1	158.1	125.8	288.4	0.9	4.0	28.4
Cleveland	317.1	199.9	427.2	93.4	65.0	137.9	3.4	4.4	51.9
Detroit	419.6	99.5	499.2	51.9	59.0	576.5	1.3	1.7	13.6
Minneapolis/St. Paul	2,301.4	888.5	957.8	70.7	152.7	167.5	0.0	74.1	90.0
St. Louis	363.9	465.9	760.6	9.9	34.6	121.5	3.4	12.6	34.3
Dallas	1,562.6	1,332.5	4,820.2	239.1	179.4	967.6	20.1	22.9	145.6
Houston	369.9	171.3	366.5	35.1	5.8	11.4	75.9	1.4	3.0
Los Angeles	101.6	462.6	354.7	6.0	109.1	83.1	1.7	37.2	16.5
San Francisco	6.9	197.5	175.2	1.3	39.0	39.8	0.0	1.6	5.9
Denver	396.4	59.0	906.4	--	0.0	133.8	103.3	14.8	33.3
Average	557.7	343.8	874.5	67.8	77.1	190.9	22.2	9.4	28.4
Median	140.1	262.1	663.1	6.0	30.8	119.9	0.0	2.4	17.7

Area	Balance Inquiries°			Transfers #			Checking Deposits++		
	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	68.6	106.4	366.8	4.7	6.8	11.6	8.6	15.8	42.3
New York	12.0	151.3	348.7	0.4	0.7	1.7	0.0	2.1	39.2
Philadelphia	210.0	260.4	358.5	17.1	26.9	26.3	85.3	90.5	178.8
Pittsburgh	96.9	375.8	479.7	0.0	26.7	53.0	0.0	126.1	182.6
Washington, D.C.	29.1	30.2	99.1	0.4	0.0	0.0	1.7	1.1	0.0
Atlanta	43.3	98.3	233.8	0.9	2.1	9.4	0.9	4.2	73.6
Chicago	272.6	243.1	348.8	50.1	42.9	48.5	240.4	193.7	328.4
Cleveland	122.6	160.1	255.7	9.0	9.1	190.5	89.6	54.7	96.1
Detroit	0.0	28.0	61.6	15.0	6.3	29.3	90.4	21.7	127.2
Minneapolis/St. Paul	51.4	109.6	119.6	16.3	14.5	18.1	155.6	0.0	488.0
St. Louis	86.1	57.3	228.6	3.4	9.4	16.3	50.6	56.6	210.6
Dallas	437.1	480.5	2,279.2	12.9	3.8	78.1	52.3	0.0	627.2
Houston	85.7	41.0	64.8	3.0	0.0	0.8	0.0	0.0	0.0
Los Angeles	12.9	324.0	71.9	0.4	11.5	1.7	4.3	51.7	42.7
San Francisco	1.3	43.5	51.5	0.0	1.7	7.2	0.0	0.1	35.0
Denver	238.3	137.1	464.3	50.6	5.6	26.9	255.4	8.7	157.2
Average	110.5	132.9	265.5	11.5	7.7	29.6	64.7	29.0	141.2
Median	20.6	88.8	172.6	0.9	3.1	9.8	0.0	0.0	163.7

+$\frac{Q63}{Q94}$; ±$\frac{Q64}{Q94}$; §$\frac{Q65}{Q94}$; °$\frac{Q66}{Q94}$; #$\frac{Q67}{Q94}$; ++$\frac{Q68}{Q94}$; §§$\frac{Q69}{Q94}$; °°$\frac{Q70}{Q94}$; ##$\frac{Q71}{Q94}$; ***$\frac{Q72}{Q94}$.

Note: These footnotes also pertain to the continuation of Table 34 on the following page.

TABLE 34 (Continued)

Area	Savings Deposits§§ 1984	1985	1986	Bill Payments°° 1984	1985	1986
Boston	1.7	3.2	9.4	0.0	0.1	6.0
New York	0.0	0.0	18.5	0.0	0.0	0.0
Philadelphia	8.6	24.2	35.3	0.4	0.3	0.7
Pittsburgh	0.0	26.7	42.9	0.0	0.0	0.1
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.0	0.3	14.9	0.0	0.0	3.1
Chicago	27.0	21.3	35.3	0.0	0.1	6.3
Cleveland	15.4	11.6	24.4	0.0	0.0	0.0
Detroit	6.0	6.3	87.3	0.0	0.1	1.1
Minneapolis/St. Paul	3.4	0.0	70.8	0.0	0.0	0.0
St. Louis	0.9	6.3	18.1	0.0	0.1	3.3
Dallas	6.0	0.0	43.3	0.0	0.0	78.6
Houston	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	0.0	0.0	0.0	0.0	12.4	0.0
San Francisco	0.0	9.1	1.0	0.0	0.0	0.0
Denver	166.3	0.0	11.8	0.0	0.0	3.2
Average	14.7	6.5	32.3	0.0	0.9	3.9
Median	0.0	0.0	18.5	0.0	0.0	1.3

Area	Other ATM Transactions## 1984	1985	1986	Total ATM Transactions*** 1984	1985	1986
Boston	0.0	0.0	0.9	320.1	455.6	1,187.6
New York	0.0	0.0	181.3	42.4	478.5	1,198.5
Philadelphia	97.3	100.6	373.6	1,401.4	1,712.4	2,060.2
Pittsburgh	144.9	0.0	500.7	1,024.3	1,917.8	3,223.4
Washington, D.C.	0.0	0.0	339.5	282.4	236.4	755.4
Atlanta	29.6	9.4	5,045.0	345.9	753.8	2,219.8
Chicago	64.3	63.1	0.0	1,848.4	1,985.8	2,782.3
Cleveland	29.1	0.0	0.0	679.7	674.0	1,123.0
Detroit	0.0	11.5	109.1	584.1	419.5	323.1
Minneapolis/St. Paul	0.0	0.0	0.0	2,598.4	1,239.3	1,506.3
St. Louis	0.0	0.0	0.0	518.1	621.0	1,232.3
Dallas	0.0	0.4	27.3	2,330.6	2,020.1	8,825.0
Houston	0.0	0.0	0.0	569.1	219.4	446.4
Los Angeles	13.7	0.0	78.3	140.6	1,014.6	552.0
San Francisco	0.0	0.0	449.9	9.9	647.5	290.4
Denver	241.7	27.0	1,914.6	1,656.4	701.9	1,795.2
Average	38.8	11.3	1,377.5	897.0	761.9	1,493.1
Median	0.0	0.0	245.9	1,661.1	555.8	1,002.6

TABLE 35

NUMBER OF MONTHLY PROPRIETARY TRANSACTIONS PER ATM LOCATION BY AREA

	Main Office Units											
	Lobby+			Vestibule±			Through the Wall§			Drive-up°		
Area	1984	1985	1986	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	188.6	5,080.5	4,247.7	0.0	4,458.6	4,286.1	857.1	8,034.0	4,649.5	0.0	0.0	*
New York	3,287.1	3,352.4	4,085.8	3,720.0	2,980.3	8,790.4	9,531.4	7,334.5	5,904.5	0.0	0.0	3,122.0
Philadelphia	6.754.3	2,300.0	1,825.5	0.0	3,798.5	3,209.3	2,215.7	2,490.9	3,057.0	0.0	0.0	1,669.0
Pittsburgh	0.0	1,814.3	3,620.5	0.0	0.0	*	0.0	3,224.5	5,230.5	0.0	0.0	*
Washington, D.C.	3,835.7	0.0	1,919.5	0.0	0.0	7,552.5	0.0	0.0	4,532.0	5,875.7	0.0	*
Atlanta	4,110.0	2,046.4	1,800.9	2,704.3	2,990.0	4,335.1	1,427.1	1,988.0	3,556.5	0.0	335.0	4,575.8
Chicago	1,774.3	1,131.3	2,874.2	6,951.4	184.0	2,514.0	552.9	2,303.7	1,481.8	0.0	0.0	508.5
Cleveland	2,820.0	1,824.4	3,588.5	1,911.4	4,365.0	4,082.0	3,484.3	3,646.7	4,514.5	0.0	0.0	*
Detroit	1.084.3	722.3	3,825.0	3,227.1	4,750.3	1,583.5	1,624.3	0.0	*	0.0	0.0	*
Minneapolis/St. Paul	1,165.7	2,646.3	1,521.8	0.0	3,511.7	2,189.5	1,662.9	3,654.0	3,204.3	0.0	2,782.0	2,055.0
St. Louis	325.7	932.3	2,909.0	805.7	1,852.8	6,643.0	1,320.0	733.3	3,811.5	0.0	0.0	*
Dallas	1,941.4	2,005.1	*	3,368.6	4,497.6	*	3,252.9	3,885.1	5,210.5	2,014.3	3,011.0	*
Houston	0.0	2,464.5	2,380.5	0.0	2,295.2	595.0	0.0	0.0	*	0.0	1,595.0	*
Los Angeles	3,964.3	2,269.3	5,209.0	0.0	0.0	*	10,637.1	1,535.0	7,289.1	0.0	0.0	*
San Francisco	1,041.4	3,639.8	3,865.0	6,985.7	2,467.3	1,549.0	1,924.3	2,146.3	6,116.0	0.0	0.0	*
Denver	1,195.7	1,602.2	1,397.0	2,764.3	0.0	6,075.5	0.0	0.0	3,411.5	3,822.9	2,178.0	*
Average	2,093.0	1,933.2	2,838.4	2,027.4	3,445.5	5,732.0	2,405.6	2,448.2	4,021.5	732.1	2,087.5	3,074.2
Median	1,444.3	1,766.2	2,405.0	720.0	3,267.0	4,935.0	612.9	2,168.0	4,068.0	0.0	1,595.0	3,122.0

No Respondents; $\frac{+Q143}{Q79}$ $\frac{\pm Q144}{Q80}$ $\frac{\S Q145}{Q81}$ $\frac{{}^{\circ}Q146}{Q82}$ $\frac{\#Q147}{Q83}$ $\frac{{+}{+}Q148}{Q84}$ $\frac{{+}{+}Q149}{Q85}$ $\frac{\S\S Q150}{Q86}$ $\frac{{}^{\circ\circ}Q151}{Q87}$ $\frac{\#\#Q152}{Q88}$ $\frac{{+}{+}{+}Q153}{Q89}$;

$\frac{\pm\pm\pm Q154}{Q90}$; $\frac{\S\S\S Q155}{Q91}$; $\frac{{}^{\circ\circ\circ}Q156}{Q92}$; $\frac{\#\#\#Q157}{Q93}$; $\frac{{+}{+}{+}{+}Q158}{Q94}$.

Note: These footnotes also pertain to the continuation of Table 35 on the following pages.

TABLE 35 (Continued)

Area	Branch Office Units Lobby# 1984	 1985	 1986	 Vestibule†† 1984	 1985	 1986	 Through-the-Wall‡‡ 1984	 1985	 1986	 Drive-up§§ 1984	 1985	 1986
Boston	471.4	949.5	1,094.6	175.7	3,632.5	4,054.5	351.4	2.953.0	3,152.8	544.3	3,146.1	3,700.0
New York	968.6	1,350.7	2,331.2	4,062.9	4,757.7	5,871.1	5,434.3	8,114.8	5,487.1	4,097.1	3,354.5	4,597.3
Philadelphia	1,084.3	1,209.3	1,408.6	6,162.9	3,128.6	4,165.8	2,464.3	3,302.2	4,521.1	1,620.0	3,048.0	3,538.2
Pittsburgh	0.0	658.4	1,040.1	0.0	0.0	*	762.9	3,212.2	[illegible],288.7	0.0	3,782.9	4,661.1
Washington, D.C.	420.0	0.0	1,139.2	5,087.1	0.0	3,571.1	2,652.9	0.0	[illegible] 144.9	2,207.1	0.0	1,711.9
Atlanta	814.3	1,012.2	1,336.0	6,420.0	4,153.7	4,166.3	2,562.9	2,235.1	3,817.6	2,250.0	1,862.4	3,970.4
Chicago	2,434.3	1,401.8	2,939.0	1,817.1	2,248.0	3,122.5	4,435.7	3,372.4	2,088.3	557.1	2,275.2	1,747.7
Cleveland	1,757.1	620.8	858.5	5,284.3	4,850.0	4,666.0	2,657.1	3,206.3	4,610.6	4,770.0	1,931.1	6,363.0
Detroit	34.3	433.6	926.4	818.6	426.4	2,520.5	1,937.1	1,868.4	5,223.2	3,617.1	1,052.7	4,187.2
Minneapolis/St. Paul	0.0	0.0	2,363.7	780.0	3,206.5	3,584.0	0.0	4,585.0	*	0.0	1,302.0	*
St. Louis	360.0	558.1	839.8	2,738.6	2,557.3	4,433.5	4,041.4	4,272.0	5,160.9	2,451.4	4,760.0	4,929.6
Dallas	1,765.7	999.3	621.0	3,180.0	3,331.0	6,289.7	4,435.7	7,296.6	6,463.0	3,244.3	2,834.1	3,520.0
Houston	0.0	0.0	*	0.0	0.0	2,504.5	0.0	0.0	*	0.0	0.0	1,327.0
Los Angeles	822.9	342.2	633.0	0.0	0.0	2,580.0	1,602.9	1,255.4	6,082.4	1,007.1	0.0	4,174.2
San Francisco	471.4	735.1	1,065.0	6,664.3	850.0	*	2,640.0	4,116.5	4,710.1	1,692.9	1,772.4	6,259.0
Denver	591.4	0.0	1,325.0	0.0	1,399.0	3,460.0	6,214.3	0.0	3,957.8	0.0	0.0	3,017.1
Average	749.7	838.0	1,660.8	2,699.5	2,842.7	4,902.8	2,637.1	2,537.2	4,588.6	1,753.7	1,894.0	4,021.4
Median	480.0	523.0	1,079.8	1,877.1	3,241.0	3,478.5	1,774.3	2,502.6	4,516.2	814.3	2,632.1	3,360.1

TABLE 35 (Continued)

	Off-Premise Units											
	Free-Standing°°			University/ College##			Shopping Center+++			Grocery/ Retail Store‡‡‡		
Area	1984	1985	1986	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	0.0	3,738.1	9,912.5	0.0	2,331.3	2,575.8	381.4	2,267.6	*	85.7	187.3	*
New York	6,664.3	4,901.4	3,510.9	2,472.9	6,080.9	5,706.2	2,472.9	2,498.8	3,849.8	3,261.4	3,947.7	2,918.6
Philadelphia	1,692.9	2,185.9	5,197.0	6,360.0	357.0	*	1,247.1	1,719.8	2,651.5	3,904.3	4,225.5	4,740.3
Pittsburgh	0.0	131.5	1,404.8	0.0	901.0	4,767.3	0.0	0.0	3,720.1	0.0	1,362.0	1,977.3
Washington, D.C.	925.7	0.0	3,640.5	7,924.3	0.0	7,314.3	3,561.4	0.0	3,689.9	6,077.1	0.0	6,256.2
Atlanta	3,565.7	4,316.2	4,663.7	4,260.0	2,786.5	4,891.4	2,922.9	1,367.7	4,447.8	1,954.3	1,181.7	2,159.4
Chicago	3,570.0	3,636.4	*	0.0	1,632.5	*	0.0	666.7	515.0	1,067.1	691.9	1,697.0
Cleveland	1,645.7	3,564.8	3,274.8	0.0	5,904.0	6,845.6	3,218.6	4,032.4	3,275.5	0.0	2,012.1	1,610.5
Detroit	0.0	0.0	1,760.9	955.7	505.8	2,443.7	0.0	265.0	1,405.7	0.0	0.0	1,881.3
Minneapolis/St. Paul	0.0	0.0	*	0.0	0.0	*	0.0	0.0	*	0.0	0.0	*
St. Louis	407.1	1,887.5	3,590.6	1,834.3	3,151.7	2,445.0	1,714.3	2,744.9	2,844.0	621.4	60.0	2,234.3
Dallas	3,167.1	3,302.0	3,992.2	3,368.6	6,148.0	*	4,512.9	4,436.7	5,829.2	0.0	95.9	2,605.0
Houston	0.0	0.0	*	0.0	0.0	*	0.0	0.0	*	0.0	0.0	*
Los Angeles	1,658.6	0.0	5,149.1	647.1	76.9	10,128.8	4,101.4	743.4	5,473.9	0.0	0.0	825.0
San Francisco	7,568.6	0.0	6,048.0	1,384.3	1,472.5	1,420.0	2,982.9	4,457.6	3,102.7	0.0	484.7	762.6
Denver	3,552.9	701.5	4,217.3	0.0	0.0	6,391.0	0.0	0.0	3,329.3	0.0	0.0	1,722.5
Average	2,151.2	2,419.4	4,204.0	1,825.4	2,301.8	5,444.8	1,694.7	1,960.0	4,016.8	1,060.7	464.9	1,317.8
Median	1,200.0	1,646.3	3,274.8	1,645.7	1,700.8	5,524.3	1,487.1	1,482.0	3,158.0	1,371.4	1,102.5	2,269.0

TABLE 35 (Continued)

Off-Premise Units

Area	Office/Corporate Complex§§§			Hospital°°°			Other###			Total++++		
	1984	1985	1986	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	338.6	754.5	2,386.4	287.1	2,590.9	2,253.2	0.0	333.4	532.3	265.7	2,833.5	3,509.6
New York	407.1	1,354.7	2,135.3	3,518.6	4,137.8	3,271.4	0.0	958.5	4,061.9	3,278.6	4,025.8	4,854.9
Philadelphia	2,738.6	1,997.0	2,153.5	295.7	994.6	1,594.0	1,877.1	2,207.5	*	2,850.0	2,740.6	3,797.0
Pittsburgh	0.0	84.5	1,587.8	0.0	614.0	2,012.5	0.0	0.0	*	0.0	2,660.4	3,782.0
Washington, D.C.	1,037.1	0.0	2,287.8	1,208.6	0.0	3,831.0	1,050.0	0.0	*	2,832.9	67.1	4,612.2
Atlanta	2.057.1	2,034.3	1,806.6	1,285.7	905.8	1,205.2	668.6	2,889.1	2,310.3	2,862.9	3,290.1	3,737.5
Chicago	904.3	765.5	991.6	4,152.9	215.5	3,168.7	2,421.4	0.0	2,937.6	2,280.0	1,894.9	2,427.7
Cleveland	312.9	1,166.2	1,256.5	1,778.6	2,654.9	1,525.0	0.0	0.0	946.0	2931.4	2,991.1	4,079.8
Detroit	0.0	434.0	1,607.4	188.6	508.8	827.0	0.0	3,441.0	3,946.6	1,697.1	1,525.0	3,106.3
Minneapolis/St. Paul	0.0	0.0	*	0.0	0.0	*	1,230.0	0.0	*	1,208.6	3,273.5	2,474.8
St. Louis	2,820.0	667.5	1,815.4	818.6	893.0	1,079.0	827.1	1,407.0	2,293.0	2,151.4	2,140.7	4,236.1
Dallas	4,602.9	3,300.3	5,805.5	3,368.6	723.0	1,788.0	0.0	5,130.5	*	3,767.1	2,991.2	5,307.4
Houston	0.0	0.0	*	0.0	0.0	*	0.0	0.0	*	0.0	2,250.0	2,087.6
Los Angeles	0.0	0.0	2,090.3	1,075.7	0.0	3,860.0	2,948.6	0.0	3,976.7	1,628.6	2,368.2	5,682.6
San Francisco	0.0	1,630.8	1,217.9	1,080.0	0.0	285.3	4,131.4	1,697.3	*	2,670.0	2,823.9	2,559.2
Denver	0.0	0.0	*	0.0	0.0	1,283.0	0.0	0.0	941.0	3,942.9	240.5	3,748.5
Average	951.2	902.7	1,922.4	1,191.2	1,486.8	2,168.5	947.1	1,311.6	729.1	2,147.9	2,542.2	4,023.9
Median	711.4	818.0	1,497.8	818.6	723.7	1,480.5	1,028.6	635.0	2,196.7	1,684.3	2,656.2	3,824.8

TABLE 36

NUMBER OF MONTHLY INTERCHANGE TRANSACTIONS PER ATM UNIT LOCATION BY AREA

	Main Office											
	Lobby+			Vestibule±			Through-the-Wall§			Drive-up°		
Area	1984	1985	1986	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	85.7	63.0	*	0.0	3,659.1	679.0	0.0	668.5	41.0	0.0	0.0	*
New York	8.6	1.2	117.8	25.7	896.8	1,815.6	21.4	26.0	53.0	0.0	0.0	194.0
Philadelphia	484.3	854.1	1,257.7	0.0	503.5	860.3	2,408.6	2,367.7	4,959.0	0.0	0.0	465.0
Pittsburgh	0.0	0.0	527.0	0.0	0.0	*	0.0	0.0	2,256.5	0.0	0.0	*
Washington, D.C.	51.4	0.0	*	0.0	0.0	*	0.0	0.0	631.0	437.1	0.0	*
Atlanta	98.6	16.6	202.8	227.1	0.0	1,044.3	55.7	380.1	815.8	0.0	95.0	1,436.0
Chicago	334.3	421.3	975.0	1,230.0	120.9	3,978.5	797.1	1,709.7	2,979.7	0.0	0.0	*
Cleveland	162.9	160.9	160.3	347.1	613.3	334.0	454.3	8.0	300.0	0.0	0.0	*
Detroit	0.0	50.7	497.7	0.0	264.7	102.0	0.0	0.0	*	0.0	0.0	*
Minneapolis/St. Paul	2,455.7	806.7	601.0	3,501.4	1,319.7	1,307.5	3,501.4	899.7	1,611.8	0.0	1,214.0	956.0
St. Louis	758.6	51.5	91.8	1,435.7	164.2	629.0	150.0	531.8	544.0	0.0	0.0	*
Dallas	1,195.7	427.5	*	2,014.3	658.4	*	1,457.1	765.5	2,261.0	2,117.1	612.9	*
Houston	0.0	150.0	575.5	0.0	184.0	330.0	0.0	0.0	*	0.0	206.0	*
Los Angeles	25.7	2,810.0	*	0.0	0.0	*	94.3	1,497.0	64.3	0.0	0.0	*
San Francisco	8.6	32.0	212.0	0.0	304.0	533.0	30.0	0.0	513.0	0.0	0.0	*
Denver	651.4	460.2	76.0	1,894.3	0.0	2,433.5	0.0	0.0	753.5	6,060.0	313.0	*
Average	395.1	346.2	635.5	667.2	869.1	1,362.0	560.6	594.3	925.4	538.4	455.1	1,099.4
Median	0.0	0.0	235.0	0.0	184.0	1,047.5	0.0	0.0	631.0	0.0	313.0	956.0

*No Respondents

+$\frac{Q175}{Q79}$; ±$\frac{Q176}{Q80}$; §$\frac{Q177}{Q81}$; °$\frac{Q178}{Q82}$; #$\frac{Q179}{Q83}$; ++$\frac{Q180}{Q84}$; ±±$\frac{Q181}{Q85}$; §§$\frac{Q182}{Q86}$; °°$\frac{Q183}{Q87}$; ##$\frac{Q184}{Q88}$; +++$\frac{Q185}{Q89}$;

±±±$\frac{Q186}{Q90}$; §§§$\frac{Q187}{Q91}$; °°°$\frac{Q188}{Q92}$; ###$\frac{Q189}{Q93}$; ++++$\frac{Q190}{Q94}$.

Note: These footnotes also pertain to the continuation of Table 36 on the following pages.

TABLE 36 (Continued)

	Branch Office											
	Lobby#			Vestibule++			Through-the-Wall±±			Drive-up§§		
Area	1984	1985	1986	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	60.0	15.1	237.1	55.7	126.6	957.4	25.7	578.0	605.2	0.0	293.9	1,148.1
New York	8.6	39.5	143.7	38.6	449.0	1,032.3	51.4	347.9	1,558.6	51.4	176.2	471.9
Philadelphia	171.4	341.6	1,556.8	132.9	898.0	1,522.8	1,041.4	1,571.8	2,510.6	2,507.1	2,687.5	3,689.2
Pittsburgh	0.0	187.0	281.1	0.0	0.0	*	0.0	1,536.1	2,716.6	0.0	1,682.6	2,599.3
Washington, D.C.	0.0	0.0	*	222.9	0.0	*	81.4	0.0	453.4	60.0	0.0	393.8
Atlanta	25.7	85.8	214.1	12.9	0.6	638.3	304.3	304.4	930.3	184.3	118.0	750.0
Chicago	527.1	666.2	1,741.2	2,395.7	1,614.5	2,530.2	2,130.0	525.1	3,562.1	115.7	1,954.3	4,634.0
Cleveland	201.4	107.9	72.5	861.4	287.7	344.0	394.3	519.0	523.7	124.3	340.0	642.4
Detroit	0.0	39.8	95.9	55.7	100.7	2,108.0	55.7	435.0	1,338.5	252.9	160.6	1,221.1
Minneapolis/St. Paul	0.0	0.0	1,658.3	1,641.4	1,675.5	1,824.5	0.0	1,019.0	*	0.0	1,265.0	*
St. Louis	544.3	5.3	95.3	480.0	472.4	951.4	261.4	569.1	486.8	68.6	106.7	308.0
Dallas	917.1	133.0	263.7	1,482.9	653.6	1,580.4	2,001.4	2,614.1	5,073.3	1,864.3	467.3	719.5
Houston	0.0	0.0	*	0.0	0.0	338.0	0.0	0.0	*	0.0	0.0	220.0
Los Angeles	0.0	0.0	31.0	0.0	0.0	90.0	17.1	845.4	228.4	0.0	0.0	302.0
San Francisco	0.0	30.0	35.5	0.0	175.0	*	4.3	311.8	274.4	8.6	390.1	442.5
Denver	227.1	0.0	489.0	0.0	492.0	957.5	4,071.4	0.0	863.9	0.0	0.0	582.7
Average	167.7	88.4	308.1	461.3	234.5	1,063.7	652.5	537.2	1,066.0	92.1	467.0	1,333.7
Median	0.0	0.0	167.1	0.0	170.8	953.0	0.0	0.1	888.7	0.0	24.0	719.5

TABLE 36 (Continued)

Area	Off-Premises											
	Free-Standing°°			University/ College##			Shopping Center+++			Grocery/ Retail Store‡‡‡		
	1984	1985	1986	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	0.0	0.0	*	0.0	0.0	2,156.0	0.0	244.2	*	0.0	0.0	*
New York	4.3	774.0	1,112.6	132.9	278.8	549.5	0.0	331.3	414.9	257.1	12.0	81.7
Philadelphia	1,954.3	0.0	2,330.0	0.0	677.0	*	0.0	898.5	3,421.5	852.9	1,862.8	3,223.7
Pittsburgh	0.0	1,130.0	1,026.4	0.0	3,639.0	4,048.0	2,035.7	0.0	3,629.0	0.0	4,528.0	1,406.8
Washington, D.C.	34.3	0.0	*	162.9	0.0	1,329.0	0.0	0.0	758.5	210.0	0.0	*
Atlanta	531.4	951.2	1,841.0	608.6	821.4	1,529.3	240.0	630.6	2,353.0	848.6	666.3	1,139.1
Chicago	0.0	2,236.9	*	0.0	3,444.5	8,590.0	720.0	423.5	4,346.0	4,920.0	2,895.9	4,296.9
Cleveland	381.4	0.0	81.2	0.0	0.0	936.6	0.0	1,347.8	60.0	0.0	505.0	55.0
Detroit	0.0	0.0	2,135.8	0.0	187.2	1,712.2	488.6	280.9	2,087.3	0.0	0.0	716.7
Minneapolis/St. Paul	0.0	0.0	*	0.0	0.0	*	0.0	0.0	*	0.0	0.0	*
St. Louis	527.1	3,953.5	2,426.7	492.9	713.0	593.5	0.0	1,265.7	947.0	0.0	115.0	3,415.0
Dallas	2,134.3	2,220.7	4,052.5	2,014.3	3,276.0	320.0	1,628.6	1,724.8	6,960.0	432.9	2,262.9	4,096.0
Houston	0.0	0.0	*	0.0	0.0	*	2,387.1	0.0	*	0.0	0.0	*
Los Angeles	0.0	0.0	414.0	0.0	1.2	481.3	0.0	3,202.6	132.6	0.0	0.0	141.5
San Francisco	12.9	0.0	386.5	0.0	41.0	2,811.0	47.1	572.6	192.0	0.0	3.6	3,266.0
Denver	2,327.1	87.7	1,892.7	0.0	0.0	1,282.6	4.3	0.0	281.7	0.0	0.0	2,560.9
Average	494.2	618.7	1,817.8	213.2	389.1	1,319.5	472.0	864.0	2,072.1	470.1	509.3	3,002.6
Median	0.0	0.0	1,109.3	0.0	41.0	1,329.0	0.0	18.5	1,103.0	0.0	18.0	1,733.0

TABLE /36 (Continued)

Area	Office/Corporate Complex§§§ 1984	Office/Corporate Complex§§§ 1985	Office/Corporate Complex§§§ 1986	Off-Premises Units: Hospital°°° 1984	Hospital°°° 1985	Hospital°°° 1986	Other### 1984	Other### 1985	Other### 1986	Total++++ 1984	Total++++ 1985	Total++++ 1986
Boston	0.0	547.2	1,668.5	77.1	418.7	792.8	0.0	104.0	205.0	38.6	268.9	808.6
New York	0.0	13.2	390.1	137.1	72.1	760.4	0.0	379.8	574.6	34.3	328.1	921.1
Philadelphia	304.3	1,553.2	2,748.2	227.1	1,087.4	810.3	0.0	834.0	*	844.3	1,343.7	2,385.9
Pittsburgh	0.0	773.5	2,019.0	0.0	2,825.0	1,381.0	0.0	0.0	*	0.0	1,307.4	2,402.8
Washington, D.C.	107.1	0.0	*	47.1	0.0	*	205.7	0.0	*	102.9	0.0	472.1
Atlanta	231.4	387.7	761.7	17.1	206.0	861.8	467.1	46.5	1,445.0	342.9	424.8	892.7
Chicago	775.7	1,411.3	2,278.8	2,768.6	528.5	2,151.3	0.0	830.4	3,527.4	0.0	1,071.6	2,535.1
Cleveland	1,011.4	567.6	321.5	900.0	437.4	24.0	0.0	0.0	42.5	0.0	423.3	405.3
Detroit	0.0	309.7	950.7	0.0	243.8	618.9	0.0	684.8	1,191.2	60.0	273.4	926.9
Minneapolis/St. Paul	0.0	0.0	*	0.0	0.0	*	2,588.6	0.0	*	2,545.7	1,129.7	1,315.4
St. Louis	0.0	481.7	515.3	1,684.3	1,415.0	503.6	167.1	373.5	355.0	488.6	425.2	563.0
Dallas	2,202.9	1,621.5	5,227.0	2,014.3	444.0	2,017.7	0.0	2,145.5	*	1,894.3	1,539.6	3,636.0
Houston	0.0	0.0	*	0.0	0.0	*	0.0	0.0	*	0.0	178.4	381.6
Los Angeles	0.0	0.0	43.7	8.6	822.8	104.0	8.6	396.8	291.8	17.1	805.4	218.8
San Francisco	0.0	324.3	120.9	0.0	0.0	663.3	0.0	18.8	*	4.3	496.5	1,550.2
Denver	0.0	0.0	*	0.0	0.0	611.0	0.0	0.0	289.0	2,605.7	340.0	1,228.8
Average	289.6	518.2	1,075.6	492.6	400.9	950.7	214.8	413.4	1,085.0	561.2	507.4	1,094.0
Median	0.0	25.5	607.0	0.0	162.0	663.3	0.0	25.0	541.0	0.0	307.6	842.1

TABLE 37

ATM UNITS BY AREA

	Main Office											
	Lobby+			Vestibule±			Through-the-Wall§			Drive-up°		
Area	1984	1985	1986	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	2.1%	1.3%	1.3%	0.5%	1.0%	1.3%	0.2%	0.2%	0.3%	0.2%	0.0%	*
New York	0.6	0.9	0.8	1.8	0.7	1.9	0.2	0.4	0.8	0.0	0.0	0.1
Philadelphia	2.4	1.9	2.2	0.0	0.5	0.5	0.8	1.6	0.8	0.0	0.0	0.2
Pittsburgh	2.0	3.8	2.7	0.0	0.0	*	0.0	1.9	1.3	0.0	0.0	*
Washington, D.C.	0.9	0.0	0.7	0.2	0.3	0.5	0.3	1.6	0.5	0.2	0.0	*
Atlanta	0.6	0.5	1.4	0.2	0.3	0.8	6.0	6.1	5.6	0.0	0.2	0.3
Chicago	27.1	19.6	21.2	2.6	3.3	1.0	4.5	3.3	3.6	1.3	0.9	1.0
Cleveland	2.0	1.2	2.5	0.8	0.5	4.5	0.5	2.1	4.5	0.0	0.0	2.2
Detroit	1.8	0.9	0.9	0.4	0.3	0.2	1.1	0.1	0.1	0.4	0.0	*
Minneapolis/St. Paul	25.0	20.0	25.0	0.0	20.0	12.5	25.0	20.0	25.0	0.0	6.7	6.3
St. Louis	8.8	4.1	1.9	2.8	1.7	1.4	2.3	1.2	2.7	0.0	0.0	*
Dallas	1.3	4.1	3.3	3.8	12.7	*	3.1	11.8	1.6	1.3	3.6	1.6
Houston	66.7	25.0	25.0	0.0	62.5	12.5	0.0	0.0	*	16.7	12.5	*
Los Angeles	0.6	0.6	0.4	0.3	0.0	*	0.6	2.1	1.5	0.0	0.0	*
San Francisco	1.3	0.5	0.5	0.2	0.4	0.3	0.9	0.6	0.8	0.2	0.0	0.1
Denver	7.1	6.3	2.1	4.4	0.0	2.8	0.0	5.3	1.4	0.9	1.1	*
Average	2.5%	1.8%	1.7%	0.8%	1.0%	1.1%	2.1%	2.2%	2.3%	0.2%	0.2%	0.3%
Median	1.2%	0.0%	2.8%	0.0%	0.0%	3.0%	0.0%	0.8%	2.6%	0.0%	0.0%	1.8%

$^{+}\frac{Q79}{Q94} \times 100$; $^{\pm}\frac{Q80}{Q94} \times 100$; $^{\S}\frac{Q81}{Q94} \times 100$; $^{\circ}\frac{Q82}{Q94} \times 100$; $^{\#}\frac{Q83}{Q94} \times 100$;

$^{++}\frac{Q84}{Q94} \times 100$; $^{\pm\pm}\frac{Q85}{Q94} \times 100$; $^{\S\S}\frac{Q86}{Q94} \times 100$; $^{\circ\circ}\frac{Q87}{Q94} \times 100$; $^{\#\#}\frac{Q88}{Q94} \times 100$;

$^{+++}\frac{Q89}{Q94} \times 100$; $^{\pm\pm\pm}\frac{Q90}{Q94} \times 100$; $^{\S\S\S}\frac{Q91}{Q94} \times 100$; $^{\circ\circ\circ}\frac{Q92}{Q94} \times 100$; $^{\#\#\#}\frac{Q93}{Q94} \times 100$.

Note: These footnotes pertain to the continuation of Table 37 on the following pages.

*No Respondents

TABLE 37 (Continued)

	Branch Office											
	Lobby#			Vestibule++			Through-the-Wall±±			Drive-up§§		
Area	1984	1985	1986	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	6.7%	13.7%	3.7%	49.9%	45.2%	40.6%	23.6%	14.5%	31.1%	2.5%	9.6%	6.3%
New York	27.7	19.7	17.5	50.0	56.7	32.5	9.2	4.1	25.0	3.1	5.7	6.6
Philadelphia	17.5	17.6	12.4	11.8	6.6	18.9	56.5	49.9	36.8	4.6	9.2	9.2
Pittsburgh	20.9	14.2	6.2	0.0	0.0	*	36.0	66.0	69.3	0.0	7.5	5.3
Washington, D.C.	5.0	2.4	4.6	13.4	7.1	13.2	60.2	61.2	61.1	5.5	7.3	5.7
Atlanta	1.5	1.7	2.1	2.8	3.7	1.9	66.3	70.7	70.8	2.0	2.4	3.4
Chicago	14.2	7.5	14.5	1.3	4.7	8.3	16.1	27.1	11.4	5.2	4.7	4.1
Cleveland	15.1	9.2	9.5	8.0	11.3	20.3	49.2	58.1	43.1	14.6	7.2	3.1
Detroit	21.4	12.7	11.6	30.8	36.3	39.3	20.7	21.7	22.5	11.6	12.1	5.5
Minneapolis/St. Paul	0.0	0.0	18.7	25.0	13.3	12.5	0.0	13.3	*	0.0	6.7	*
St. Louis	15.3	11.0	6.8	12.5	11.0	8.2	34.3	30.8	55.9	4.0	1.7	10.1
Dallas	5.6	1.8	3.3	12.5	4.1	13.9	41.9	10.5	18.0	7.5	3.2	1.6
Houston	0.0	0.0	*	0.0	0.0	50.0	0.0	0.0	*	16.7	0.0	12.5
Los Angeles	5.0	4.0	3.3	1.4	0.8	0.3	77.7	77.3	76.1	4.4	5.7	5.3
San Francisco	9.3	11.5	7.1	0.2	0.1	3.7	80.7	53.2	56.6	2.8	1.7	2.5
Denver	2.7	1.1	1.4	4.4	4.2	7.1	41.6	20.0	31.9	0.9	0.0	5.0
Average	10.6%	9.6%	7.5%	14.8%	18.2%	16.1%	48.9%	42.2%	48.4%	4.8%	6.4%	5.1%
Median	2.9%	2.2%	5.3%	0.0%	0.9%	22.2%	44.8%	41.1%	55.0%	1.7%	2.9%	6.4%

TABLE 37 (Continued)

	Off-Premise											
	Free-Standing°°			University/ College##			Shopping Center+++			Grocery/ Retail Store‡‡‡		
Area	1984	1985	1986	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	0.0%	0.8%	0.3%	0.7%	1.9%	2.0%	2.1%	1.2%	1.0%	2.3%	1.0%	1.3%
New York	0.8	1.7	1.1	2.4	3.3	2.5	1.0	3.3	1.2	0.5	0.6	5.4
Philadelphia	1.3	1.9	4.2	0.3	0.5	1.3	1.1	0.5	4.5	1.1	0.9	2.7
Pittsburgh	2.8	1.9	2.2	2.4	0.9	1.3	0.0	5.4	4.4	22.5	0.9	3.1
Washington, D.C.	3.1	5.5	3.4	1.1	1.6	2.0	3.0	3.9	1.9	1.1	1.3	0.8
Atlanta	6.5	6.0	4.0	2.5	2.5	2.1	3.0	1.7	3.0	6.1	1.1	1.2
Chicago	3.2	3.7	*	0.6	0.9	0.5	0.0	2.8	1.0	11.6	9.3	21.8
Cleveland	1.8	0.6	1.0	0.3	1.1	1.7	1.5	0.8	1.7	0.3	2.1	1.1
Detroit	0.0	1.3	3.7	0.7	3.1	1.8	1.4	2.0	0.7	1.8	3.7	6.0
Minneapolis/St. Paul	0.0	0.0	*	0.0	0.0	*	0.0	0.0	*	0.0	0.0	*
St. Louis	0.8	1.2	2.7	1.7	1.7	0.8	2.3	4.1	2.7	13.3	25.6	1.1
Dallas	10.0	4.5	8.2	0.6	0.5	1.6	8.1	9.5	5.7	0.0	27.3	31.2
Houston	0.0	0.0	*	0.0	0.0	*	0.0	0.0	*	0.0	0.0	*
Los Angeles	2.5	0.4	2.7	1.1	1.7	1.0	2.5	2.7	1.9	0.0	0.2	0.4
San Francisco	0.4	0.6	0.8	0.9	0.2	0.7	1.9	3.2	2.1	0.2	27.8	21.7
Denver	31.0	44.2	24.1	0.0	3.2	5.0	0.0	5.3	4.3	6.2	2.1	7.8
Average	3.4%	2.8%	2.9%	1.4%	1.8%	1.7%	2.1%	2.5%	2.2%	4.1%	6.1%	5.0%
Median	0.0%	0.0%	3.6%	0.0%	0.0%	2.9%	0.0%	0.0%	3.5%	0.0%	0.0%	2.8%

TABLE 37 (Continued)

Area	Off-Premise Units								
	Office/Corporate Complex§§§			Hospital°°°			Other###		
	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	7.6%	7.1%	8.2%	1.4%	1.6%	2.0%	0.2%	0.8%	0.6%
New York	1.6	1.7	1.8	1.0	1.5	1.7	0.2	0.7	1.1
Philadelphia	1.6	2.1	4.1	0.8	1.2	1.4	0.3	0.9	0.9
Pittsburgh	0.0	1.9	2.2	0.0	0.9	1.8	0.0	0.0	0.0
Washington, D.C.	2.5	3.9	2.6	2.0	3.1	2.1	0.6	0.8	1.0
Atlanta	1.7	1.7	2.0	0.3	0.4	0.4	0.6	1.1	1.5
Chicago	5.8	5.6	4.7	1.9	1.9	3.6	4.5	4.7	3.1
Cleveland	2.3	2.9	2.0	3.8	2.6	1.7	0.0	0.0	1.1
Detroit	2.5	4.1	4.3	2.2	1.0	1.5	3.3	0.7	2.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0
St. Louis	0.3	3.5	3.3	0.3	0.6	1.6	1.4	1.2	0.8
Dallas	3.1	1.8	2.5	1.3	3.6	4.9	0.0	0.9	2.5
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	0.8	0.4	0.7	1.7	1.0	0.4	1.7	2.7	5.8
San Francisco	0.0	0.5	2.1	0.2	0.0	0.5	0.4	0.5	0.6
Denver	0.0	2.1	0.0	0.0	1.1	0.7	0.9	4.2	6.4
Average	2.1%	2.9%	2.9%	1.2%	1.3%	1.3%	0.8%	1.0%	1.6%
Median	0.0%	0.9%	2.9%	0.0%	0.0%	2.4%	0.0%	0.0%	2.7%

TABLE 38

ATM UNIT INSTALLATION PLANS BY AREA:
PERCENTAGE OF TOTAL ATM UNITS TO BE INSTALLED

	Main Office											
	Lobby+			Vestibule±			Through-the-Wall§			Drive-up°		
Area	1984	1985	1986	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	2.8%	0.6%	0.0%	0.0%	0.0%
New York	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	1.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	4.8	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0
Atlanta	1.2	1.6	0.0	0.0	0.0	0.4	1.2	1.6	0.9	0.0	0.0	0.4
Chicago	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0
Cleveland	1.4	1.5	1.3	0.0	0.0	10.3	0.0	0.0	3.9	0.0	0.0	6.4
Detroit	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	33.3	0.0
St. Louis	0.0	0.0	1.2	0.0	0.0	1.2	0.0	0.0	11.8	0.0	0.0	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	0.0	1.5	2.0	0.0	0.0	0.0	0.0	0.0	0.7	1.4	0.0	0.0
San Francisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denver	3.8	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	19.2	0.0	0.0
Average	0.9%	0.6%	0.4%	0.0%	0.1%	1.1%	0.3%	0.6%	1.3%	0.8%	0.1%	0.7%
Median	0.0%	0.0%	7.7%	0.0%	0.0%	12.3%	0.0%	0.0%	4.6%	0.0%	0.0%	50.0%

+$\frac{Q111}{Q126}$ x 100; ±$\frac{Q112}{Q126}$ x 100; §$\frac{Q113}{Q126}$ x 100; °$\frac{Q114}{Q126}$ x 100; #$\frac{Q115}{Q126}$ x 100; ++$\frac{Q116}{Q126}$ x 100; ±±$\frac{Q117}{Q126}$ x 100;

§§$\frac{Q118}{Q126}$ x 100; °°$\frac{Q119}{Q126}$ x 100; ##$\frac{Q120}{Q126}$ x 100; +++$\frac{Q121}{Q126}$ x 100; ±±±$\frac{Q122}{Q126}$ x 100; §§§$\frac{Q123}{Q126}$ x 100;

°°°$\frac{Q124}{Q126}$ x 100; ###$\frac{Q125}{Q126}$ x 100.

Note: These footnotes also pertain to the continuation of Table 38 on the following pages.

TABLE 38 (Continued)

	Branch Office											
	Lobby#			Vestibule++			Through-the-Wall±±			Drive-up§§		
Area	1984	1985	1986	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	6.0%	5.6%	0.0%	37.3%	36.1%	50.6%	24.1%	11.1%	23.4%	0.0%	25.0%	4.4%
New York	21.3	59.6	23.8	40.4	18.7	5.7	1.1	0.0	38.7	19.1	14.0	18.4
Philadelphia	13.7	0.0	0.0	12.3	8.8	19.1	26.0	31.9	38.9	30.1	33.6	22.2
Pittsburgh	73.5	0.0	0.0	0.0	0.0	0.0	7.4	86.7	62.5	5.9	0.0	16.7
Washington, D.C.	4.8	0.0	0.0	9.7	6.4	9.1	37.1	61.7	58.2	21.0	10.6	20.0
Atlanta	5.8	7.8	4.7	0.0	0.8	0.4	43.9	58.9	64.2	3.5	3.1	12.9
Chicago	0.0	0.0	0.0	6.3	0.0	0.0	12.5	17.0	4.3	0.0	16.0	13.0
Cleveland	32.9	15.2	0.0	2.9	4.5	12.8	5.7	36.4	24.4	37.1	28.8	21.1
Detroit	0.0	3.0	3.9	0.0	11.9	0.0	16.7	17.9	15.7	25.0	47.8	15.7
Minneapolis/St. Paul	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	0.0	0.0	3.5	11.5	0.0	5.9	38.5	25.0	34.1	3.8	0.0	10.6
Dallas	0.0	6.3	0.0	10.7	0.0	0.0	21.4	31.3	29.4	14.3	0.0	17.7
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	0.0	4.6	4.7	0.0	0.0	0.0	60.9	73.8	54.1	15.9	4.6	12.8
San Francisco	5.7	33.3	0.0	0.0	0.0	0.0	47.1	21.4	34.7	4.3	6.3	20.4
Denver	15.4	0.0	0.0	7.7	0.0	1.7	0.0	0.0	18.3	3.8	0.0	31.7
Average	14.8%	19.2%	5.6%	10.9%	7.7%	9.9%	28.0%	29.5%	39.1%	12.8%	15.4%	16.2%
Median	0.0%	0.0%	20.0%	0.0%	0.0%	50.0%	16.7%	0.0%	56.0%	0.0%	0.0%	24.0%

TABLE 38 (Continued)

	Off-Premise											
	Free-Standing°°			University/ College##			Shopping Center+++			Grocery Store‡‡‡		
Area	1984	1985	1986	1984	1985	1986	1984	1985	1986	1984	1985	1986
Boston	0.0%	8.3%	3.2%	4.8%	8.3%	1.3%	7.2%	0.0%	0.0%	12.0%	0.0%	2.5%
New York	1.1	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	11.5
Philadelphia	5.5	7.1	4.0	2.7	0.9	0.8	0.0	0.9	4.8	1.4	0.0	0.0
Pittsburgh	7.4	13.3	0.0	0.0	0.0	0.0	2.9	0.0	12.5	2.9	0.0	0.0
Washington, D.C.	3.2	8.5	4.5	1.6	0.0	0.9	1.6	4.3	2.7	0.0	0.0	0.0
Atlanta	10.5	15.5	2.6	2.3	0.0	0.4	1.8	0.0	3.5	21.6	3.9	3.5
Chicago	0.0	8.0	4.3	0.0	0.0	4.3	0.0	0.0	0.0	50.0	24.0	34.8
Cleveland	11.4	7.6	1.3	2.9	0.0	1.3	1.4	1.5	2.6	0.0	1.5	1.9
Detroit	8.3	0.0	0.0	8.3	0.0	3.9	25.0	1.5	7.9	8.3	3.0	40.2
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	11.5	0.0	5.9	0.0	0.0	1.2	3.8	6.3	10.6	7.7	62.5	0.0
Dallas	7.1	0.0	11.8	0.0	0.0	5.9	3.6	0.0	11.8	35.7	62.5	11.8
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	0.0	6.2	4.1	4.3	1.5	3.4	0.0	3.1	2.7	7.2	0.0	8.1
San Francisco	1.4	2.4	8.2	0.0	0.8	6.1	18.6	5.6	2.0	17.1	19.8	0.0
Denver	46.2	75.0	3.3	0.0	0.0	8.3	0.0	0.0	0.0	0.0	12.5	31.7
Average	6.6%	7.8%	2.9%	2.0%	0.6%	1.8%	3.6%	1.7%	3.2%	10.2%	7.7%	8.7%
Median	0.0%	0.0%	20.0%	0.0%	0.0%	11.1%	0.0%	0.0%	15.4%	0.0%	0.0%	40.0%

TABLE 38 (Continued)

Area	Office§§§ 1984	Office§§§ 1985	Office§§§ 1986	Off-Premise Hospital°°° 1984	Off-Premise Hospital°°° 1985	Off-Premise Hospital°°° 1986	Other### 1984	Other### 1985	Other### 1986
Boston	7.2%	2.8%	7.0%	1.2%	0.0%	0.6%	0.0%	0.0%	5.7%
New York	4.5	1.0	0.4	2.2	3.1	0.0	10.1	3.1	0.8
Philadelphia	2.7	9.7	9.5	4.1	1.8	0.8	0.0	3.5	0.0
Pittsburgh	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	3.2	6.4	0.9	1.6	0.0	0.0	11.3	0.0	2.7
Atlanta	5.3	4.7	3.0	1.8	0.8	2.6	1.2	1.6	0.4
Chicago	12.5	16.0	26.1	0.0	0.0	4.3	12.5	24.0	8.7
Cleveland	1.4	1.5	1.9	2.9	1.5	0.0	0.0	0.0	10.9
Detroit	8.3	1.5	4.7	0.0	0.0	0.0	0.0	11.9	7.9
Minneapolis/St. Paul	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	15.4	3.1	8.2	3.8	3.1	1.2	3.8	0.0	4.7
Dallas	3.6	0.0	0.0	3.6	0.0	5.9	0.0	0.0	5.9
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	4.3	1.5	1.3	1.4	0.0	0.0	4.3	3.1	6.1
San Francisco	5.7	4.0	10.2	0.0	3.2	12.2	0.0	0.0	6.1
Denver	0.0	12.5	0.0	0.0	0.0	1.7	0.0	0.0	3.3
Average	4.5%	4.2%	4.0%	1.7%	1.6%	1.1%	2.8%	2.9%	4.0%
Median	0.0%	0.0%	16.7%	0.0%	0.0%	13.3%	0.0%	0.0%	12.0%

TABLE 39

NUMBER OF MONTHLY PROPRIETARY TRANSACTIONS PER CASH DISPENSER LOCATION BY AREA

	Main Office							
	Lobby#		Vestibule++		Through-the-Wall±±		Drive-up§§	
Area	1985	1986	1985	1986	1985	1986	1985	1986
Boston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New York	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	2,532.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chicago	0.0	1,289.0	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detroit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	1,217.0	1,769.5	0.0	0.0	0.0	0.0	0.0	0.0
San Francisco	0.0	340.0	0.0	0.0	0.0	0.0	0.0	0.0
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	1,570.5	1,292.0	0.0	0.0	0.0	0.0	0.0	0.0
Median	1,217.0	1,289.0	0.0	0.0	0.0	0.0	0.0	0.0

#$\frac{Q159}{Q95}$; ++$\frac{Q160}{Q96}$; ±±$\frac{Q161}{Q97}$; §§$\frac{Q162}{Q98}$; ##$\frac{Q163}{Q99}$; +++$\frac{Q164}{Q100}$; ±±±$\frac{Q165}{Q101}$; §§§$\frac{Q166}{Q102}$; °°$\frac{Q167}{Q103}$;

###$\frac{Q168}{Q104}$; ++++$\frac{Q169}{Q105}$; ±±±±$\frac{Q170}{Q106}$; §§§§$\frac{Q171}{Q107}$; °°°$\frac{Q172}{Q108}$; ####$\frac{Q173}{Q119}$.

Note: These footnotes also pertain to the continuation of Table 39 on the following pages.

TABLE 39 (Continued)

Area	Branch Office							
	Lobby##		Vestibule+++		Through-the-Wall‡‡‡		Drive up§§§	
	1985	1986	1985	1986	1985	1986	1985	1986
Boston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,413.0
New York	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	10,231.0	8,811.0	1,671.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.0	3,169.0	0.0	0.0	3,981.0	3,562.0	0.0	0.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detroit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	131.0	1,037.0	0.0	0.0	0.0	13,644.0	0.0	0.0
San Francisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	2,656.0	3,018.2	1,671.0	0.0	3,981.0	5,002.3	0.0	1,413.0
Median	197.0	3,169.0	1,671.0	0.0	3,981.0	13,644.0	0.0	1,413.0

TABLE 39 (Continued)

Area	Off-Premises							
	Free-Standing°°		College###		Shopping Center++++		Grocery±±±±	
	1985	1986	1985	1986	1985	1986	1985	1986
Boston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New York	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	0.0	0.0	4,337.0	459.5	0.0	0.0	859.0	1,130.3
Pittsburgh	0.0	4,767.0	0.0	0.0	0.0	450.0	0.0	481.1
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.0	1,102.0	0.0	0.0	1,352.0	955.0	601.0	284.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0	265.0	2,130.0
Cleveland	0.0	0.0	2,778.0	0.0	0.0	0.0	1,043.0	2,415.2
Detroit	0.0	0.0	0.0	0.0	0.0	542.2	0.0	303.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	0.0	227.0	0.0	0.0	0.0	8,955.3	742.0	4,780.0
San Francisco	0.0	0.0	3,000.0	0.0	0.0	5,683.0	0.0	2,335.2
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	0.0	0.0	2,578.0	0.0	386.0	2,787.5	599.0	1,317.6
Median	0.0	0.0	2,778.0	0.0	0.0	1,313.0	502.0	2,130.0

TABLE 39 (Continued)

	Off-Premises (Continued)							
	Office§§§§		Hospital°°°		Other####		Total All Locations	
	1985	1986	1985	1986	1985	1986	1985	1986
Boston	0.0	1,797.7	0.0	0.0	0.0	0.0	N/A	1,413.2
New York	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
Philadelphia	0.0	1,114.0	482.0	543.0	354.0	602.0	N/A	1,708.9
Pittsburgh	0.0	741.0	0.0	4,854.0	0.0	0.0	N/A	1,257.8
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
Atlanta	975.0	1,208.5	0.0	195.5	605.0	476.0	N/A	703.7
Chicago	0.0	3,159.3	0.0	0.0	0.0	0.0	N/A	2,579.4
Cleveland	0.0	0.0	0.0	0.0	0.0	900.0	N/A	2,246.9
Detroit	0.0	0.0	0.0	0.0	0.0	0.0	N/A	502.3
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
Los Angeles	1,000.0	0.0	1,200.0	1,458.0	0.0	0.0	N/A	4,840.3
San Francisco	0.0	0.0	0.0	3,095.0	0.0	0.0	N/A	2,376.6
Denver	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
Average	366.0	1,477.8	336.0	1,[illegible]5.6	79.0	79.1	N/A	1,720.4
Median	333.0	1,200.0	0.0	1,458.0	78.0	602.0	N/A	1,688.7

N/A — Not Available

TABLE 40

NUMBER OF MONTHLY INTERCHANGE TRANSACTIONS PER CASH DISPENSER LOCATION BY AREA

	Main Office							
	Lobby#		Vestibule++		Through-the-Wall±±		Drive up§§	
Area	1985	1986	1985	1986	1985	1986	1985	1986
Boston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New York	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chicago	0.0	97.0	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detroit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
San Francisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	61.0	97.0	0.0	0.0	0.0	0.0	0.0	0.0
Median	0.0	97.0	0.0	0.0	0.0	0.0	0.0	0.0

#$\frac{Q191}{Q95}$; ++$\frac{Q192}{Q96}$; °°$\frac{Q193}{Q97}$; §§$\frac{Q194}{Q98}$; ##$\frac{Q195}{Q99}$; +++$\frac{Q196}{Q100}$; ±±±$\frac{Q197}{Q101}$; §§§$\frac{Q198}{Q102}$; °°$\frac{Q199}{Q103}$;

###$\frac{Q200}{Q104}$; ++++$\frac{Q201}{Q105}$; ±±±±$\frac{Q202}{Q106}$; §§§§$\frac{Q203}{Q107}$; °°°$\frac{Q204}{Q108}$; ####$\frac{Q205}{Q109}$; *$\frac{Q206}{Q110}$.

Note: These footnotes also pertain to the continuation of Table 40 on the following pages.

TABLE 40 (Continued)

Area	Branch Office Lobby## 1985	1986	Vestibule+++ 1985	1986	Through-the-Wall‡‡‡ 1985	1986	Drive up§§§ 1985	1986
Boston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0
New York	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	616.0	729.0	0.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.0	181.0	0.0	0.0	439.0	694.8	0.0	0.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detroit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	539.0	0.0	0.0	0.0	15,936.0	0.0	0.0	0.0
San Francisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	558.3	455.0	0.0	0.0	2,321.0	694.8	0.0	75.0
Median	616.0	729.0	0.0	0.0	439.6	694.8	0.0	75.0

TABLE 40 (Continued)

Area	Off-Premises (Continued) Free-Standing°° 1985	Free-Standing°° 1986	College### 1985	College### 1986	Shopping Center++++ 1985	Shopping Center++++ 1986	Grocery±±±± 1985	Grocery±±±± 1986
Boston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New York	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	0.0	0.0	0.0	3,094.5	0.0	0.0	1,765.0	3,100.0
Pittsburgh	0.0	193.0	0.0	0.0	0.0	5,269.5	0.0	4,339.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.0	211.0	0.0	0.0	487.0	955.0	514.0	1,881.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0	8,599.0	3,399.0
Cleveland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	604.4
Detroit	0.0	0.0	0.0	0.0	0.0	1,034.6	0.0	411.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	1,602.0	123.0	0.0	0.0	7,364.0	0.0	1,469.0	88.0
San Francisco	0.0	0.0	0.0	0.0	0.0	0.0	563.0	0.0
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	1,602.0	175.7	0.0	3,094.5	3,295.0	1,857.7	456.0	2,202.6
Median	0.0	193.0	0.0	3,766.0	0.0	1,889.0	589.0	3,046.0

TABLE 40 (Continued)

	Off-Premises (Continued)							
	Office§§§§		Hospital°°°		Other####		Total All Locations*	
	1985	1986	1985	1986	1985	1986	1985	1986
Boston	0.0	1,543.7	0.0	0.0	0.0	1,841.0	N/A	1,309.4
New York	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
Philadelphia	0.0	1,214.0	2,346.0	3,551.0	2,196.0	6,783.0	N/A	3,085.1
Pittsburgh	0.0	1,582.5	578.0	1,622.0	0.0	0.0	N/A	3,490.4
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
Atlanta	797.0	565.9	0.0	520.0	0.0	608.0	N/A	1,505.6
Chicago	0.0	1,149.0	0.0	0.0	0.0	0.0	N/A	1,388.6
Cleveland	0.0	0.0	0.0	0.0	0.0	180.0	N/A	557.2
Detroit	0.0	0.0	0.0	0.0	0.0	0.0	N/A	930.7
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
Los Angeles	0.0	0.0	191.0	0.0	145.0	0.0	N/A	105.5
San Francisco	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
Denver	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
Average	278.0	1,013.4	738.0	1,553.3	424.0	2,353.0	N/A	1,840.0
Median	0.0	1,149.0	191.0	1,622.0	355.0	1,841.0	N/A	

N/A — Not Available

TABLE 41

CASH DISPENSER UNITS BY AREA

	Main Office							
	Lobby#		Vestibule++		Through-the-Wall±±		Drive up§§	
Area	1985	1986	1985	1986	1985	1986	1985	1986
Boston	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
New York	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	7.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Chicago	33.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detroit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	3.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0
San Francisco	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	1.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Median	0.0%	7.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

#$\frac{Q95}{Q110} \times 100$; ++$\frac{Q96}{Q110} \times 100$; ±±$\frac{Q97}{Q110} \times 100$; §§$\frac{Q98}{Q110} \times 100$; ##$\frac{Q99}{Q110} \times 100$;

+++$\frac{Q100}{Q110} \times 100$; ±±±$\frac{Q101}{Q110} \times 100$; §§§$\frac{Q102}{Q110} \times 100$; °°$\frac{Q103}{Q110} \times 100$;

###$\frac{Q104}{Q110} \times 100$; ++++$\frac{Q105}{Q110} \times 100$; ±±±±$\frac{Q106}{Q110} \times 100$; §§§§$\frac{Q107}{Q110} \times 100$; °°°$\frac{Q108}{Q110} \times 100$;

####$\frac{Q109}{Q110} \times 100$.

Note: These footnotes also pertain to the continuation of Table 41 on the following pages.

TABLE 41 (Continued)

Area	Branch Office Lobby## 1985	Lobby## 1986	Vestibule+++ 1985	Vestibule+++ 1986	Through-the-Wall±±± 1985	Through-the-Wall±±± 1986	Drive up§§§ 1985	Drive up§§§ 1986
Boston	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	1.0%	4.3%
New York	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	10.0	2.5	10.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.0	3.6	0.0	0.0	20.0	7.8	0.0	0.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detroit	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	8.0	1.3	0.0	0.0	3.0	0.5	0.0	0.0
San Francisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	1.0%	2.0%	0.0%	0.0%	2.0%	2.1%	0.0%	0.1%
Median	0.0%	14.3%	0.0%	0.0%	0.0%	31.6%	0.0%	50.0%

TABLE 41 (Continued)

							Off-Premises							
Area	Free-Standing°°		College ###		Shopping Center++++		Grocery±±±±		Office§§§§		Hospital°°°		Other####	
	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986
Boston	0.0%	0.0%	1.0%	8.7%	1.0%	8.7%	93.0%	56.5%	1.0%	13.0%	0.0%	0.0%	1.0%	8.7%
New York	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	96.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	0.0	0.0	10.0	2.5	0.0	0.0	30.0	89.3	0.0	4.1	10.0	0.8	30.0	0.8
Pittsburgh	0.0	3.9	0.0	0.0	0.0	7.7	33.0	65.4	0.0	15.4	67.0	7.7	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.0	0.0	0.0	1.2	7.0	2.4	17.0	74.1	47.0	6.0	0.0	1.8	3.0	1.8
Chicago	0.0	0.0	9.0	0.0	0.0	0.0	33.0	20.0	33.0	60.0	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	0.0	7.4	0.0	0.0	91.0	77.8	0.0	7.4	0.0	3.7	0.0	3.7
Detroit	0.0	0.0	0.0	0.0	0.0	77.8	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	11.0	0.9	0.0	0.0	8.0	1.4	19.0	80.6	0.0	0.9	0.0	1.4	45.0	12.2
San Francisco	0.0	0.0	6.0	0.0	1.0	2.0	97.0	94.1	6.0	0.0	3.0	2.0	0.0	0.0
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
Average	1.0%	0.6%	1.0%	1.4%	2.0%	3.0%	74.0%	78.7%	11.0%	4.5%	1.8%	1.7%	6.0%	5.2%
Median	0.0%	20.0%	0.0%	14.3%	0.0%	11.1%	50.0%	88.9%	0.0%	50.0%	0.0%	12.5%	0.0%	33.3%

TABLE 42

CASH DISPENSER UNIT INSTALLATION PLANS BY AREA: PERCENTAGE OF TOTAL UNITS TO BE INSTALLED

	Main Office							
	Lobby#		Vestibule++		Through-the-Wall±±		Drive-up§§	
	1985	1986	1985	1986	1985	1986	1985	1986
Boston	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
New York	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detroit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
San Francisco	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Median	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

#$\frac{Q127}{Q142}$ x 100; ++$\frac{Q128}{Q142}$ x 100; ±±$\frac{Q129}{Q142}$ x 100; §§$\frac{Q130}{Q142}$ x 100; ##$\frac{Q131}{Q142}$ 100;

+++$\frac{Q132}{Q142}$ x 100; ±±±$\frac{Q133}{Q142}$ x 100; §§§$\frac{Q134}{Q142}$ x 100; °°$\frac{Q135}{Q142}$ x 100; ###$\frac{Q136}{Q142}$ x 100;

++++$\frac{Q137}{Q142}$ x 100; ±±±±$\frac{Q138}{Q142}$ x 100; §§§§$\frac{Q139}{Q142}$ x 100; °°°$\frac{Q140}{Q142}$ x 100; ####$\frac{Q141}{Q142}$ x 100.

Note: These footnotes also pertain to the continuation of Table 42 on the following pages.

TABLE 42 (Continued)

	Branch Office							
	Lobby##		Vestibule+++		Through-the-Wall‡‡‡		Drive-up§§§	
	1985	1986	1985	1986	1985	1986	1985	1986
Boston	0.0%	13.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
New York	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detroit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0
San Francisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	0.0%	2.4%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%
Median	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

TABLE 42 (Continued)

Area	Off-Premises													
	Free-Standing°°		College###		Shopping Center++++		Grocery±±±±		Office§§§§		Hospital°°°		Other####	
	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986
Boston	0.0%	0.0%	7.0%	0.0%	0.0%	0.0%	68.0%	87.0%	9.0%	0.0%	16.0%	0.0%	0.0%	0.0%
New York	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0
Philadelphia	10.0	0.0	20.0	4.6	0.0	4.6	10.0	4.6	60.0	36.4	0.0	0.0	0.0	50.0
Pittsburgh	0.0	0.0	0.0	7.7	0.0	3.9	75.0	46.2	0.0	0.0	25.0	11.5	0.0	30.8
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.0	0.0	0.0	0.0	0.0	0.0	93.0	68.2	2.0	22.7	2.0	0.0	0.0	4.6
Chicago	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	11.0	0.0	0.0	0.0	0.0	60.0	22.0	40.0	12.0	0.0	0.0	0.0
Detroit	0.0	0.0	0.0	0.0	56.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	96.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	7.0	7.0	7.0	8.8	7.0	5.3	57.0	36.8	0.0	1.8	7.0	0.0	7.0	40.4
San Francisco	0.0	0.0	2.0	0.0	2.0	0.0	95.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	1.0%	2.4%	3.0%	4.8%	20.0%	3.6%	62.0%	46.7%	8.0%	9.6%	4.0%	2.4%	0.0%	28.1%
Median	0.0%	13.8%	0.0%	17.2%	0.0%	50.0%	0.0%	75.0%	0.0%	100.0%	0.0%	13.3%	0.0%	100.0%

TABLE 43

PERCENTAGE OF ON-LINE ATM UNITS BY AREA

Area	1984	1985	1986
Boston	100.0%	100.0%	100.0%
New York	90.0	100.0	100.0
Philadelphia	100.0	67.0	90.0
Pittsburgh	100.0	100.0	100.0
Washington, D.C.	100.0	100.0	100.0
Atlanta	100.0	100.0	100.0
Chicago	57.1	75.0	88.9
Cleveland	100.0	71.4	100.0
Detroit	100.0	100.0	100.0
Minneapolis/St. Paul	100.0	100.0	100.0
St. Louis	100.0	100.0	100.0
Dallas	100.0	100.0	100.0
Houston	100.0	100.0	100.0
Los Angeles	100.0	100.0	100.0
San Francisco	87.5	100.0	91.7
Denver	100.0	100.0	80.0
Average	94.9%	94.5%	97.0%

TABLE 44

SERVICE CHARGES BY AREA

Area	No 1985	No 1986	Yes 1985	Yes 1986
Boston	66.7%	45.5%	33.3%	54.5%
New York	85.7	58.3	14.3	41.7
Philadelphia	70.0	90.0	30.0	10.0
Pittsburgh	100.0	33.3	0.0	66.7
Washington, D.C.	50.0	33.3	50.0	66.7
Atlanta	36.4	26.1	63.6	73.9
Chicago	80.0	66.7	20.0	33.3
Cleveland	50.0	66.7	50.0	33.3
Detroit	37.5	28.6	62.5	71.4
Minneapolis/St. Paul	0.0	0.0	100.0	100.0
St. Louia	33.3	63.6	66.7	36.4
Dallas	0.0	0.0	100.0	100.0
Houston	100.0	0.0	0.0	100.0
Los Angeles	50.0	37.5	50.0	62.5
San Francisco	40.0	46.2	60.0	53.8
Denver	66.7	40.0	33.3	60.0
Average	54.0%	46.3%	46.0%	53.7%

TABLE 45

ATM SERVICE CHARGES — STRUCTURE OF TYPES OF FEES

	Transaction		Flat Fee		Both		Flat Fee Only If Below Minimum Balance		Interchange Transactions Only		Other	
	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986
Boston	83.3%	33.3%	16.7%	0.0%	0.0%	0.0%	N/A	50.0%	N/A	0.0%	0.0%	16.7%
New York	100.0	40.0	0.0	20.0	0.0	0.0	N/A	20.0	N/A	0.0	0.0	20.0
Philadelphia	71.4	0.0	28.6	0.0	0.0	0.0	N/A	0.0	N/A	0.0	0.0	100.0
Pittsburgh	100.0	50.0	0.0	0.0	0.0	0.0	N/A	0.0	N/A	0.0	0.0	50.0
Washington, D.C.	100.0	50.0	0.0	0.0	0.0	0.0	N/A	16.7	N/A	33.3	0.0	0.0
Atlanta	100.0	5.9	0.0	0.0	0.0	11.8	N/A	47.1	N/A	5.9	0.0	29.4
Chicago	87.5	33.3	12.5	0.0	0.0	0.0	N/A	66.7	N/A	0.0	0.0	0.0
Cleveland	75.0	0.0	25.0	0.0	0.0	100.0	N/A	100.0	N/A	0.0	0.0	0.0
Detroit	50.0	20.0	50.0	0.0	0.0	0.0	N/A	0.0	N/A	40.0	0.0	40.0
Minneapolis/St. Paul	*	50.0	*	0.0	*	0.0	N/A	0.0	N/A	0.0	*	50.0
St. Louis	100.0	100.0	0.0	0.0	0.0	0.0	N/A	0.0	N/A	0.0	0.0	0.0
Dallas	*	0.0	*	0.0	*	0.0	N/A	0.0	N/A	0.0	*	0.0
Houston	100.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0	N/A	100.0	0.0	0.0
Los Angeles	66.7	0.0	33.3	0.0	0.0	0.0	N/A	20.0	N/A	60.0	0.0	20.0
San Francisco	100.0	14.3	0.0	0.0	0.0	0.0	N/A	28.6	N/A	0.0	0.0	57.1
Denver	100.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0	N/A	66.7	0.0	33.3
Average	86.3%	27.8%	13.7%	1.4%	0.0%	2.8%	N/A	27.8%	N/A	15.3%	0.0%	25.0%

*No response.

TABLE 46

SERVICE CHARGES COMPARISON: ATM TRANSACTIONS AND DDA PAPER ITEMS

Area	DDA Charge Lower Than ATM Charge 1985	1986	DDA Charge Higher Than ATM Charge 1985	1986	Same 1985	1986
Boston	0.0%	50.0%	100.0%	0.0%	0.0%	50.0%
New York	0.0	0.0	100.0	25.0	0.0	75.0
Philadelphia	0.0	33.3	100.0	66.7	0.0	0.0
Pittsburgh	*	0.0	*	100.0	*	0.0
Washington, D.C.	0.0	33.3	100.0	66.7	0.0	0.0
Atlanta	0.0	38.9	57.1	16.7	42.9	44.4
Chicago	0.0	25.0	66.7	0.0	33.3	75.0
Cleveland	0.0	60.0	75.0	0.0	25.0	40.0
Detroit	16.7	66.7	50.0	16.7	33.3	16.7
Minneapolis/St. Paul	0.0	0.0	50.0	0.0	50.0	100.0
St. Louis	0.0	66.7	100.0	0.0	0.0	33.3
Dallas	0.0	100.0	33.3	0.0	67.3	0.0
Houston	*	*	*	*	*	*
Los Angeles	*	40.0	60.0	60.0	40.0	0.0
San Francisco	0.0	37.5	57.1	0.0	42.9	62.5
Denver	0.0	0.0	100.0	50.0	0.0	50.0
Average	2.0%	41.8%	68.6%	20.2%	29.4%	38.0%

*No response.

TABLE 47

ACTIVE PROPRIETARY ATM ACCESS CARDS

Area	1984	1985	1986
Boston	58.0%	61.5%	51.4%
New York	40.4	34.0	34.2
Philadelphia	42.7	*	41.9
Pittsburgh	0.0	*	81.5
Washington, D.C.	42.2	*	50.4
Atlanta	51.2	30.8	49.5
Chicago	45.0	56.4	51.3
Cleveland	33.7	78.6	42.0
Detroit	41.0	62.6	39.6
Minneapolis/St. Paul	0.0	47.7	65.5
St. Louis	48.6	46.4	66.5
Dallas	48.5	*	88.1
Houston	0.0	66.7	70.0
Los Angeles	41.8	39.2	61.5
San Francisco	38.6	42.0	58.3
Denver	30.1	*	44.7
Average	41.7%	51.5%	50.3%

*No response.

4

POINT-OF-SALE (POS) RESULTS

Point-of-sale still is in its infancy. Those institutions that are attempting to implement POS programs, have found many barriers and issues that, to date, have hampered many of their programs.

A lack of standardized rules and procedures is one major reason banks have been unable to develop successful POS systems. In 1986, the American Bankers Association formed a committee to standardize operating procedures for system design, account configuration, on-line issues, and many other issues related to POS networks. At this writing, the committee has not yet finished its task.

Many bankers believe that the lack of a single, nationally recognized debit mark has hampered the creation of an identity for POS. A separate committee, representing MasterCard, VISA, PLUS, Cirrus, and a selected group of banks has been formed to help create a national debit mark. Plans call for allowing this mark only on debit cards. It would not replace any other identities of the network or financial institution electing to use it.

Fees also are a major issue in developing a POS network. Bankers and merchants alike often ask, "Who pays whom for what?" Merchants look for ways to reduce their costs and improve their service capabilities, while bankers explore methods of reducing their costs, generating fee income, and creating new banking relationships with merchants. The matter of fees could continue to be a major barrier for the next few years.

These are just a few of the major issues facing bankers and merchants interested in developing a POS system. Until these two groups can agree on such issues as fee structure, terminal requirements, systems design, and several other issues, the future of POS is in doubt.

Because only a few institutions are participating in POS, the volume of data collected in the survey is small and sketchy at best. Many regions yielded no data at all while in those that did only a few banks responded.

POS Transaction Mix

Credit card transactions are the most frequent POS type occurring today, accounting for 58.9 percent of the total proprietary volume and 76.3 percent of the total interchange volume. These figures are not surprising because for several years many merchants have used terminals to authorize credit card transactions. Such transactions would seem to be a logical progression into the development of an on-line POS system.

The percentage of checking transactions has increased from 1985 to 1986 as follows: Proprietary checking transactions up from 21.9 percent to 31.7 percent. In the same period, interchange checking transactions rose from 5.6 percent to 16.2 percent. This rise stems largely from increased efforts by some regional networks, such as Honor in Florida and Avail in Georgia, to market debit POS services to banking customers.

POS Dollar Values

Credit card transactions registered the largest average dollar value per transaction. A proprietary credit card transaction averaged $107.79 in 1986, up from $47.97 in 1985. In the same time span, an interchange credit transaction rose from $40.05 to $79.64.

Checking dollar values also rose in 1986, but not at the same pace as credit card values. Proprietary checking transactions averaged $49.73 in 1986 but only $21.34 in 1985. Interchange checking values rose to an average of $50.25 in 1986 compared to $30.60 in the previous years.

The fact that credit card dollar values exceeded checking dollar values is not unexpected. Generally, the typical customer using a credit card is making a larger purchase than the one writing a check, thus, credit card values should continue to be higher than debit card POS values.

POS Transactions per Terminal

The average number of transactions occurring per terminal in 1986 was low compared to all transactions in the retail payments system. Only 12.9 percent of the respondents reported they had POS terminals in operation in 1986.

Compared to 1985 figures, all categories of transaction types showed a decrease in the average number of proprietary and interchange transactions per terminal. The largest decreases occurred in both proprietary and interchange credit card volumes. Proprietary credit card transactions fell from 128.0 per terminal all the way down to 19.9 per terminal. Interchange credit card transactions dropped from 201.6 transactions per terminal to 62.4. This decline can be attributed to a larger number of data capture terminals being installed in 1986 along with a much smaller increase in the credit card transaction volume.

POS Terminal Locations

Because the survey included only commercial banks, most POS terminals involved—65.5 percent—were in retail locations. If it had included nonbanks, such as gasoline companies and convenience stores that have installed terminals, this percentage would have been much smaller. However, since only commercial banks were surveyed, figures showed that only 3.1 percent of terminals were located in gasoline and convenience store locations.

POS Terminal Installation Plans

Of 139 respondents, 18 reported they had installed a total of 13,358 terminals in 1986, and 17 respondents indicated they plan to install more than 16,000 terminals during 1987. Fully 94.2 percent of installations will be stand-alone units. Electronic Cash Registers (ECRs) will account for only 5.7 percent of POS installations and script terminals a mere 0.1 percent.

POS PIN Requirements

The survey revealed that 61.6 percent of POS terminals required the use of PINs, while 38.4 percent did not. Of the terminals installed, 94.8 percent were stand-alone units, with 66.4 percent of these needing PINs. Terminals requiring PINs primarily were installed in retail stores. Those not requiring PINs either were installed in retail stores or in locations not identified in the survey. Table 48 shows the percentages of POS terminals, by type, that either did, or did not, require PINs.

TABLE 48

PERCENTAGE OF PIN REQUIREMENTS BY POS TERMINAL TYPE

Terminal Type	PIN Required	PIN Not Required
Gas station	1.7%	1.2%
Gas/convenience store	1.5	1.3
Convenience store	2.0	1.1
Supermarket	3.2	0.0
Retail store	91.6	35.6
Other	0.0	60.8

Table 48 also indicates that, of POS terminals requiring the use of PINs, 91.6 percent were installed in retail stores. Of terminals not requiring PINs, 35.6 percent were installed in retail stores.

Of the total POS terminals, 56.5 percent are installed in retail stores and need PINs. Table 49 indicates the percentage of terminal installations and their PIN requirements in relation to total terminals installed.

TABLE 49

TOTAL POS TERMINAL PIN REQUIREMENTS

Terminal Type	PIN Required	PIN Not Required
Gas station	1.1%	0.5%
Gas/convenience store	0.8	0.5
Convenience store	1.2	0.4
Supermarket	2.0	0.0
Retail store	56.5	13.7
Other	0.0	23.3
Total	61.6%	38.4%

POS Fees

As in the case of ATMs, bankers employ different strategies in charging customers for using POS terminals. Of those surveyed, 69.6 percent indicated they did not charge customers for POS transactions. However, of the respondents who did not charge in 1986, 16.7 percent said they planned to begin doing so in 1987.

The fee structure for those banks—30.4 percent—that charged for POS use is shown in Tables 62 and 63. There is no most commonly used fee structure. However, 92.9 percent of those imposing a fee charged for both proprietary and interchange transactions, and 60.7 percent of such respondents reported they charged the same amount for both POS and ATM transactions.

TABLE 50

PERCENTAGE OF PROPRIETARY POS TRANSACTIONS BY TYPE OF ACCOUNT

	Checking[+]		Savings[°]		Credit Card[#]		Other[¼]	
	1985	1986	1985	1986	1985	1986	1985	1986
Boston	N/A	*	N/A	*	N/A	*	N/A	*
New York	N/A	*	N/A	*	N/A	*	N/A	*
Philadelphia	N/A	35.6%	N/A	*	N/A	64.4%	N/A	*
Pittsburgh	N/A	*	N/A	*	N/A	100.0	N/A	*
Washington, D.C.	N/A	100.0	N/A	*	N/A	*	N/A	*
Atlanta	N/A	2.8	N/A	0.2	N/A	97.1	N/A	*
Chicago	N/A	100.0	N/A	*	N/A	*	N/A	*
Cleveland	N/A	29.4	N/A	*	N/A	60.8	N/A	9.8
Detroit	N/A	*	N/A	*	N/A	*	N/A	*
Minneapolis/St. Paul	N/A	*	N/A	*	N/A	*	N/A	*
St. Louis	N/A	86.3	N/A	11.4	N/A	2.3	N/A	*
Dallas	N/A	*	N/A	*	N/A	*	N/A	*
Houston	N/A	*	N/A	*	N/A	*	N/A	*
Los Angeles	N/A	36.0	N/A	*	N/A	64.0	N/A	*
San Francisco	N/A	*	N/A	*	N/A	*	N/A	*
Denver	N/A	75.0	N/A	18.8	N/A	6.3	N/A	*
Average	21.9%	31.7%	0.2%	0.5%	77.8%	58.9%	0.0%	8.9%
Median	N/A	85.8%	N/A	11.8%	N/A	93.2%	N/A	15.0%

N/A — Not Available
* — No Respondents

[+] $\frac{Q232}{Q236}$ x 100; [°] $\frac{Q233}{Q236}$ x 100; [#] $\frac{Q234}{Q236}$ x 100; [¼] $\frac{Q235}{Q236}$ x 100.

TABLE 51

PERCENTAGE OF INTERCHANGE POS TRANSACTIONS BY TYPE OF ACCOUNT

	Checking+		Savings°		Credit Card#		Other¼	
	1985	1986	1985	1986	1985	1986	1985	1986
Boston	N/A	*	N/A	*	N/A	*	N/A	*
New York	N/A	80.0%	N/A	20.0%	N/A	*	N/A	*
Philadelphia	N/A	2.3	N/A	*	N/A	61.0%	N/A	36.7%
Pittsburgh	N/A	0.1	N/A	*	N/A	99.9	N/A	*
Washington, D.C.	N/A	100.0	N/A	*	N/A	*	N/A	*
Atlanta	N/A	0.6	N/A	*	N/A	99.4	N/A	*
Chicago	N/A	100.0	N/A	*	N/A	*	N/A	*
Cleveland	N/A	15.8	N/A	*	N/A	84.2	N/A	*
Detroit	N/A	*	N/A	*	N/A	*	N/A	*
Minneapolis/St. Paul	N/A	*	N/A	*	N/A	*	N/A	*
St. Louis	N/A	93.5	N/A	6.5	N/A	*	N/A	*
Dallas	N/A	*	N/A	*	N/A	*	N/A	*
Houston	N/A	*	N/A	*	N/A	*	N/A	*
Los Angeles	N/A	*	N/A	*	N/A	*	N/A	*
San Francisco	N/A	100.0	N/A	*	N/A	*	N/A	*
Denver	N/A	79.0	N/A	15.9	N/A	*	N/A	*
Average	5.6%	16.2%	1.0%	0.4%	83.2%	76.3%	11.2%	7.2%
Median	N/A	100.0%	N/A	15.9%	N/A	99.5%	N/A	37.8%

N/A — Not Available
* — No Respondents

$\frac{+Q241}{Q245} \times 100$; $\frac{{}^{\circ}Q242}{Q245} \times 100$; $\frac{\#Q243}{Q245} \times 100$; $\frac{\text{¼}Q244}{Q245} \times 100$.

TABLE 52

AVERAGE DOLLAR VALUE OF PROPRIETARY POS TRANSACTIONS

	Checking+		Savings°		Credit Card#		Other½	
	1985	1986	1985	1986	1985	1986	1985	1986
Boston	N/A	*	N/A	*	N/A	*	N/A	*
New York	N/A	*	N/A	*	N/A	*	N/A	*
Philadelphia	N/A	14.00	N/A	*	N/A	93.43	N/A	*
Pittsburgh	N/A	*	N/A	*	N/A	45.74	N/A	*
Washington, D.C.	N/A	11.64	N/A	*	N/A	*	N/A	*
Atlanta	N/A	14.55	N/A	35.60	N/A	80.52	N/A	*
Chicago	N/A	28.44	N/A	*	N/A	*	N/A	*
Cleveland	N/A	54.57	N/A	16.93	N/A	110.32	N/A	95.00
Detroit	N/A	*	N/A	*	N/A	*	N/A	*
Minneapolis/St. Paul	N/A	*	N/A	*	N/A	*	N/A	*
St. Louis	N/A	21.11	N/A	21.42	N/A	50.04	N/A	0.00
Dallas	N/A	*	N/A	*	N/A	*	N/A	*
Houston	N/A	*	N/A	*	N/A	*	N/A	*
Los Angeles	N/A	10.24	N/A	*	N/A	10.90	N/A	*
San Francisco	N/A	*	N/A	*	N/A	*	N/A	*
Denver	N/A	8.83	N/A	8.83	N/A	6.56	N/A	*
Average	$21.34	$49.73	$23.96	$21.12	$47.97	$107.79	$ 0.00	$95.00
Median	N/A	$14.77	N/A	$21.42	N/A	$80.52	N/A	$95.00

N/A — Not Available
* — No Respondents

+$\frac{Q237}{Q232}$; °$\frac{Q238}{Q233}$; #$\frac{Q239}{Q234}$; ½$\frac{Q240}{Q235}$.

TABLE 53

AVERAGE DOLLAR VALUE OF INTERCHANGE POS TRANSACTIONS

	Checking+		Savings°		Credit Card#		Other¼	
	1985	1986	1985	1986	1985	1986	1985	1986
Boston	N/A	*	N/A	*	N/A	*	N/A	*
New York	N/A	75.19	N/A	*	N/A	*	N/A	*
Philadelphia	N/A	14.30	N/A	*	N/A	55.43	N/A	14.00
Pittsburgh	N/A	27.82	N/A	*	N/A	45.57	N/A	*
Washington, D.C.	N/A	9.26	N/A	*	N/A	*	N/A	*
Atlanta	N/A	14.45	N/A	*	N/A	80.52	N/A	*
Chicago	N/A	28.37	N/A	*	N/A	*	N/A	*
Cleveland	N/A	55.00	N/A	*	N/A	88.00	N/A	*
Detroit	N/A	*	N/A	*	N/A	*	N/A	*
Minneapolis/St. Paul	N/A	*	N/A	*	N/A	*	N/A	*
St. Louis	N/A	20.91	N/A	20.25	N/A	*	N/A	*
Dallas	N/A	*	N/A	*	N/A	*	N/A	*
Houston	N/A	*	N/A	*	N/A	*	N/A	*
Los Angeles	N/A	*	N/A	*	N/A	*	N/A	*
San Francisco	N/A	34.95	N/A	*	N/A	*	N/A	*
Denver	N/A	8.24	N/A	10.30	N/A	6.33	N/A	*
Average	$30.60	$50.25	$23.75	$60.48	$40.05	$79.64	$12.49	$14.00
Median	N/A	$27.82	N/A	$20.25	N/A	$80.52	N/A	$14.00

N/A — Not Available
* — No Respondents

+$\frac{Q246}{Q241}$; °$\frac{Q247}{Q242}$; #$\frac{Q248}{Q243}$; ¼$\frac{Q249}{Q244}$.

TABLE 54

AVERAGE MONTHLY PROPRIETARY TRANSACTIONS PER POS TERMINAL

	Checking+		Savings°		Credit Card#		Other¼	
	1985	1986	1985	1986	1985	1986	1985	1986
Boston	N/A	*	N/A	*	N/A	*	N/A	*
New York	N/A	0.0	N/A	0.0	N/A	0.0	N/A	0.0
Philadelphia	N/A	236.0	N/A	0.0	N/A	0.0	N/A	0.0
Pittsburgh	N/A	0.0	N/A	0.0	N/A	7.8	N/A	0.0
Washington, D.C.	N/A	*	N/A	*	N/A	*	N/A	*
Atlanta	N/A	0.0	N/A	0.0	N/A	9.8	N/A	0.0
Chicago	N/A	28.4	N/A	0.0	N/A	0.0	N/A	0.0
Cleveland	N/A	12.3	N/A	0.0	N/A	25.5	N/A	4.1
Detroit	N/A	*	N/A	*	N/A	*	N/A	*
Minneapolis/St. Paul	N/A	*	N/A	*	N/A	*	N/A	*
St. Louis	N/A	341.7	N/A	47.1	N/A	9.5	N/A	0.0
Dallas	N/A	*	N/A	*	N/A	*	N/A	*
Houston	N/A	*	N/A	*	N/A	*	N/A	*
Los Angeles	N/A	99.5	N/A	0.0	N/A	59.4	N/A	0.0
San Francisco	N/A	*	N/A	*	N/A	*	N/A	*
Denver	N/A	48.0	N/A	12.0	N/A	4.0	N/A	0.0
Average	36.4	10.8	3.2	0.2	128.0	19.9	0.0	3.1
Median	N/A	48.0	N/A	12.0	N/A	18.0	N/A	6.8

N/A — Not Available
* — No Respondents

+$\frac{Q232}{A}$; °$\frac{Q233}{A}$; #$\frac{Q234}{A}$; ¼$\frac{Q235}{A}$

A = Q256 + Q263 + Q270 + Q277 + Q284 + Q291

TABLE 55

AVERAGE MONTHLY INTERCHANGE TRANSACTIONS PER POS TERMINAL

	Checking+		Savings°		Credit Card#		Other¼	
	1985	1986	1985	1986	1985	1986	1985	1986
Boston	N/A	*	N/A	*	N/A	*	N/A	*
New York	N/A	82.3	N/A	20.6	N/A	0.0	N/A	0.0
Philadelphia	N/A	7.7	N/A	0.0	N/A	190.6	N/A	120.4
Pittsburgh	N/A	0.1	N/A	0.0	N/A	71.1	N/A	0.0
Washington, D.C.	N/A	*	N/A	*	N/A	*	N/A	*
Atlanta	N/A	1.0	N/A	0.0	N/A	186.4	N/A	0.0
Chicago	N/A	144.6	N/A	0.0	N/A	0.0	N/A	0.0
Cleveland	N/A	10.2	N/A	0.0	N/A	54.6	N/A	0.0
Detroit	N/A	*	N/A	*	N/A	*	N/A	*
Minneapolis/St. Paul	N/A	*	N/A	*	N/A	*	N/A	*
St. Louis	N/A	186.0	N/A	25.7	N/A	0.0	N/A	0.0
Dallas	N/A	*	N/A	*	N/A	*	N/A	*
Houston	N/A	*	N/A	*	N/A	*	N/A	*
Los Angeles	N/A	0.0	N/A	0.0	N/A	0.0	N/A	0.0
San Francisco	N/A	*	N/A	*	N/A	*	N/A	*
Denver	N/A	46.0	N/A	9.3	N/A	3.0	N/A	0.0
Average	13.6	13.1	2.0	0.3	201.6	62.4	6.8	5.9
Median	N/A	82.3	N/A	20.6	N/A	90.9	N/A	120.8

N/A — Not Available
* — No Respondents

$+\frac{Q241}{A}$; $^{\circ}\frac{Q242}{A}$; $\#\frac{Q243}{A}$; ¼$\frac{Q244}{A}$.

A = Q256 + Q263 + Q270 + Q277 + Q284 + Q291.

TABLE 56

PERCENTAGE OF MONTHLY PROPRIETARY TRANSACTIONS BY TERMINAL LOCATION (WITH PINs REQUIRED)

	Gas			Gas/Convenience			Convenience			Supermarket		
Area	Stand-Alone+	Script++	ECR+++	Stand-Alone*	Script**	ECR***	Stand-Alone#	Script##	ECR###	Stand-Alone°	Script°°	ECR°°°
Boston	*	*	*	*	*	*	*	*	*	*	*	*
New York	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Philadelphia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	*	*	*	*	*	*	*	*	*	*	*	*
Atlanta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0
Cleveland	19.9	0.0	0.0	8.6	0.0	0.0	16.6	0.0	0.0	0.0	0.0	0.0
Detroit	*	*	*	*	*	*	*	*	*	*	*	*
Minneapolis/St. Paul	*	*	*	*	*	*	*	*	*	*	*	*
St. Louis	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	*	*	*	*	*	*	*	*	*	*	*	*
Houston	*	*	*	*	*	*	*	*	*	*	*	*
Los Angeles	60.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
San Francisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denver	66.8	0.0	0.0	33.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	0.8%	0.0%	0.0%	0.5%	96.8%	0.0%	0.2%	0.0%	0.0%	0.9%	0.0%	0.0%
Median	60.0%	0.0%	0.0%	33.2%	100.0%	0.0%	16.6%	0.0%	0.0%	100.0%	0.0%	0.0%

+$\frac{Q334}{A}$ x 100; ++$\frac{Q348}{A}$ x 100; +++$\frac{Q362}{A}$ x 100; *$\frac{Q335}{A}$ x 100; **$\frac{Q349}{A}$ x 100; ***$\frac{Q363}{A}$ x 100;

#$\frac{Q336}{A}$ x 100; ##$\frac{Q350}{A}$ x 100; ###$\frac{Q364}{A}$ x 100; °$\frac{Q337}{A}$ x 100; °°$\frac{Q351}{A}$ x 100; °°°$\frac{Q365}{A}$ x 100;

±$\frac{Q338}{A}$ x 100; ±±$\frac{Q352}{A}$ x 100; ±±±$\frac{Q366}{A}$ x 100; §$\frac{Q339}{A}$ x 100; §§$\frac{Q353}{A}$ x 100; §§§$\frac{Q367}{A}$ x 100.

A = Q340 + Q354 + Q368.

* — No Respondents

Note: These footnotes also pertain to the continuation of Table 56 on the following page.

TABLE 56 (Continued)

Area	Retail			Other		
	Stand-Alone‡	Script‡‡	ECR‡‡‡	Stand-Alone§	Script§§	ECR§§§
Boston	*	*	*	*	*	*
New York	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Philadelphia	0.0	0.0	0.0	100.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	*	*	*	*	*	*
Atlanta	0.0	0.0	0.0	0.0	0.0	0.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	55.0	0.0	0.0	0.0	0.0	0.0
Detroit	*	*	*	*	*	*
Minneapolis/St. Paul	*	*	*	*	*	*
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	*	*	*	*	*	*
Houston	*	*	*	*	*	*
Los Angeles	0.0	0.0	0.0	0.0	0.0	0.0
San Francisco	*	*	*	*	*	*
Denver	0.0	0.0	0.0	0.0	0.0	0.0
Average	0.6%	0.0%	0.0%	0.2%	0.0%	0.0%
Median	55.0%	0.0%	0.0%	100.0%	0.0%	0.0%

TABLE 57

PERCENTAGE OF MONTHLY PROPRIETARY TRANSACTIONS BY TERMINAL LOCATION (WITHOUT PINs REQUIRED)

	Gas			Gas/Convenience			Convenience			Supermarket		
Area	Stand-Alone+	Script++	ECR+++	Stand-Alone*	Script**	ECR***	Stand-Alone#	Script##	ECR###	Stand-Alone°	Script°°	ECR°°°
Boston	*	*	*	*	*	*	*	*	*	*	*	*
New York	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Philadelphia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0
Detroit	*	*	*	*	*	*	*	*	*	*	*	*
Minneapolis/St. Paul	*	*	*	*	*	*	*	*	*	*	*	*
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	*	*	*	*	*	*	*	*	*	*	*	*
Houston	*	*	*	*	*	*	*	*	*	*	*	*
Los Angeles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
San Francisco	*	*	*	*	*	*	*	*	*	*	*	*
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Median	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%

$\frac{+Q341}{A}$ x 100; $\frac{++Q355}{A}$ x 100; $\frac{+++Q369}{A}$ x 100; $\frac{*Q342}{A}$ x 100; $\frac{**Q356}{A}$ x 100; $\frac{***Q370}{A}$ x 100;

$\frac{\#Q343}{A}$ x 100; $\frac{\#\#Q357}{A}$ x 100; $\frac{\#\#\#Q371}{A}$ x 100; $\frac{°Q344}{A}$ x 100; $\frac{°°Q358}{A}$ x 100; $\frac{°°°Q372}{A}$ x 100;

$\frac{\pm Q345}{A}$ x 100; $\frac{\pm\pm Q359}{A}$ x 100; $\frac{\pm\pm\pm Q373}{A}$ x 100; $\frac{\S Q346}{A}$ x 100; $\frac{\S\S Q360}{A}$ x 100; $\frac{\S\S\S Q374}{A}$ x 100.

A = Q347 + Q361 + Q375.
* — No Respondents
Note: These footnotes also pertain to the continuation of Table 57 on the following page.

TABLE 57 (Continued)

Area	Retail			Other		
	Stand-Alone‡	Script‡‡	ECR‡‡‡	Stand-Alone§	Script§§	ECR§§§
Boston	*	*	*	*	*	*
New York	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Philadelphia	100.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	100.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	99.7	0.0	0.0	0.0	0.0	0.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	2.6	0.0	0.0	0.0	96.3	0.0
Detroit	*	*	*	*	*	*
Minneapolis/St. Paul	*	*	*	*	*	*
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	*	*	*	*	*	*
Houston	*	*	*	*	*	*
Los Angeles	0.0	0.0	0.0	0.0	0.0	0.0
San Francisco	*	*	*	*	*	*
Denver	0.0	0.0	0.0	0.0	0.0	0.0
Average	75.3%	0.0%	3.5%	21.0%	0.0%	0.0%
Median	99.7%	0.0%	100.0%	96.3%	0.0%	0.0%

TABLE 58

PERCENTAGE OF MONTHLY INTERCHANGE TRANSACTIONS BY TERMINAL LOCATION (WITH PINs REQUIRED)

	Gas			Gas/Convenience			Convenience			Supermarket		
Area	Stand-Alone+	Script++	ECR+++	Stand-Alone*	Script**	ECR***	Stand-Alone#	Script##	ECR###	Stand-Alone°	Script°°	ECR°°°
Boston	*	*	*	*	*	*	*	*	*	*	*	*
New York	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	93.0%	0.0%	0.0%
Philadelphia	42.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.3	0.0	5.7
Cleveland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detroit	*	*	*	*	*	*	*	*	*	*	*	*
Minneapolis/St. Paul	*	*	*	*	*	*	*	*	*	*	*	*
St. Louis	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	*	*	*	*	*	*	*	*	*	*	*	*
Houston	*	*	*	*	*	*	*	*	*	*	*	*
Los Angeles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
San Francisco	*	*	*	*	*	*	*	*	*	*	*	*
Denver	79.8	0.0	0.0	20.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	14.3%	0.0%	0.0%	0.0%	56.8%	0.0%	0.0%	0.0%	0.0%	9.1%	0.0%	0.4%
Median	79.8%	0.0%	0.0%	20.2%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%

+$\frac{Q376}{A}$ x 100; ++$\frac{Q390}{A}$ x 100; +++$\frac{Q404}{A}$ x 100; *$\frac{Q377}{A}$ x 100; **$\frac{Q391}{A}$ x 100; ***$\frac{Q405}{A}$ x 100;

#$\frac{Q378}{A}$ x 100; ##$\frac{Q392}{A}$ x 100; ###$\frac{Q406}{A}$ x 100; °$\frac{Q379}{A}$ x 100; °°$\frac{Q393}{A}$ x 100; °°°$\frac{Q407}{A}$ x 100;

±$\frac{Q380}{A}$ x 100; ±±$\frac{Q394}{A}$ x 100; ±±±$\frac{Q408}{A}$ x 100; §$\frac{Q381}{A}$ x 100; §§$\frac{Q395}{A}$ x 100; §§§$\frac{Q409}{A}$ x 100.

A = Q382 + Q396 + Q410

* — No Respondents

Note: These footnotes also pertain to the continuation of Table 58 on the following page.

TABLE 58 (Continued)

Area	Retail Stand-Alone‡	Script‡‡	ECR‡‡‡	Other Stand-Alone§	Script§§	ECR§§§
Boston	*	*	*	*	*	*
New York	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Philadelphia	57.4	0.0	0.0	0.1	0.0	0.0
Pittsburgh	100.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.0	0.0	0.0	0.0	0.0	0.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	0.0	0.0	0.0	0.0
Detroit	*	*	*	*	*	*
Minneapolis/St. Paul	*	*	*	*	*	*
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	*	*	*	*	*	*
Houston	*	*	*	*	*	*
Los Angeles	0.0	0.0	0.0	0.0	0.0	0.0
San Francisco	*	*	*	*	*	*
Denver	0.0	0.0	0.0	0.0	0.0	0.0
Average	19.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Median	57.5%	0.0%	0.0%	0.0%	0.0%	0.0%

TABLE 59

PERCENTAGE OF MONTHLY INTERCHANGE TRANSACTIONS BY TERMINAL LOCATION (WITHOUT PINs REQUIRED)

	Gas			Gas/Convenience			Convenience			Supermarket		
Area	Stand-Alone+	Script++	ECR+++	Stand-Alone*	Script***	ECR***	Stand-Alone#	Script##	ECR###	Stand-Alone°	Script°°	ECR°°°
Boston	*	*	*	*	*	*	*	*	*	*	*	*
New York	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Philadelphia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0
Detroit	*	*	*	*	*	*	*	*	*	*	*	*
Minneapolis/St. Paul	*	*	*	*	*	*	*	*	*	*	*	*
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	*	*	*	*	*	*	*	*	*	*	*	*
Houston	*	*	*	*	*	*	*	*	*	*	*	*
Los Angeles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
San Francisco	*	*	*	*	*	*	*	*	*	*	*	*
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Median	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%

$\frac{{}^{+}Q383}{A}$ x 100; $\frac{{}^{++}Q397}{A}$ x 100; $\frac{{}^{+++}Q411}{A}$ x 100; $\frac{{}^{*}Q384}{A}$ x 100; $\frac{{}^{**}Q398}{A}$ x 100; $\frac{{}^{***}Q412}{A}$ x 100;

$\frac{\#Q385}{A}$ x 100; $\frac{\#\#Q399}{A}$ x 100; $\frac{\#\#\#Q413}{A}$ x 100; $\frac{{}^{\circ}Q386}{A}$ x 100; $\frac{{}^{\circ\circ}Q400}{A}$ x 100; $\frac{{}^{\circ\circ\circ}Q414}{A}$ x 100;

$\frac{\pm Q387}{A}$ x 100; $\frac{\pm\pm Q401}{A}$ x 100; $\frac{\pm\pm\pm Q415}{A}$ x 100; $\frac{\S Q388}{A}$ x 100; $\frac{\S\S Q402}{A}$ x 100; $\frac{\S\S\S Q416}{A}$ x 100.

A = Q389 + Q403 + Q417
* = No Respondents
Note: These footnotes also pertain to the continuation of Table 59 on the following page.

TABLE 59 (Continued)

Area	Retail Stand-Alone‡	Script‡‡	ECR‡‡‡	Other Stand-Alone§	Script§§	ECR§§§
Boston	*	*	*	*	*	*
New York	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Philadelphia	100.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.9	0.0	99.1	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	99.5	0.0	0.0	0.0	0.0	0.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	0.0	97.7	0.0	0.0
Detroit	*	*	*	*	*	*
Minneapolis/St. Paul	*	*	*	*	*	*
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	*	*	*	*	*	*
Houston	*	*	*	*	*	*
Los Angeles	0.0	0.0	0.0	0.0	0.0	0.0
San Francisco	*	*	*	*	*	*
Denver	0.0	0.0	0.0	0.0	0.0	0.0
Average	84.2%	0.0%	5.4%	10.1%	0.0%	0.0%
Median	99.5%	0.0%	99.1%	97.7%	0.0%	0.0%

TABLE 60

PERCENTAGE OF POS TERMINALS PER MERCHANT LOCATION

	Gas			Gas/Convenience			Convenience			Supermarket		
Area	Stand-Alone+	Script++	ECR+++	Stand-Alone*	Script**	ECR***	Stand-Alone#	Script##	ECR###	Stand-Alone°	Script°°	ECR°°°
Boston	*	*	*	*	*	*	*	*	*	*	*	*
New York	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	94.8%	0.0%	0.0%
Philadelphia	16.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	*	*	*	*	*	*	*	*	*	*	*	*
Atlanta	9.0	0.0	0.0	10.3	0.0	0.0	6.7	0.0	0.0	0.3	0.0	0.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.5	0.0	60.5
Cleveland	0.2	0.0	0.0	0.7	0.0	0.0	1.7	0.0	0.0	0.4	0.0	0.2
Detroit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	*	*	*	*	*	*	*	*	*	*	*	*
St. Louis	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	*	*	*	*	*	*	*	*	*	*	*	*
Houston	*	*	*	*	*	*	*	*	*	*	*	*
Los Angeles	56.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
San Francisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	1.6
Denver	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	1.6%	0.0%	0.4%
Median	16.4%	0.0%	0.0%	0.0%	0.0%	0.0%	6.8%	0.0%	0.0%	94.8%	0.0%	100.0%

+$\frac{Q250 + Q257}{A}$ x 100; ++$\frac{Q264 + Q271}{A}$ x 100; +++$\frac{Q278 + Q285}{A}$ x 100; *$\frac{Q251 + Q258}{A}$ x 100; **$\frac{Q265 + Q272}{A}$ x 100; ***$\frac{Q279 + Q286}{A}$ x 100; #$\frac{Q252 + Q259}{A}$ x 100; ##$\frac{Q266 + Q273}{A}$ x 100; ###$\frac{Q280 + Q287}{A}$ x 100; °$\frac{Q253 + Q260}{A}$ x 100; °°$\frac{Q267 + Q274}{A}$ x 100; °°°$\frac{Q281 + Q288}{A}$ x 100; ±$\frac{Q254 + Q261}{A}$ x 100; ±±$\frac{Q268 + Q275}{A}$ x 100; ±±±$\frac{Q282 + Q289}{A}$ x 100; §$\frac{Q255 + Q266}{A}$ x 100; §§$\frac{Q269 + Q276}{A}$ x 100; §§§$\frac{Q283 + Q290}{A}$ x 100.

A = Q256 + Q263 + Q270 + Q277 + Q284 + Q291.
* — No Respondents
Note: These footnotes also pertain to the continuation of Table 60 on the following page.

TABLE 60 (Continued)

Area	Retail Stand-Alone‡	Script‡‡	ECR‡‡‡	Other Stand-Alone§	Script§§	ECR§§§
Boston	*	*	*	*	*	*
New York	5.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Philadelphia	83.4	0.0	0.0	0.3	0.0	0.0
Pittsburgh	0.2	0.0	99.8	0.0	0.0	0.0
Washington, D.C.	*	*	*	*	*	*
Atlanta	73.3	0.0	0.3	0.0	0.0	0.0
Chicago	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	65.4	0.0	0.0	31.4	0.0	0.0
Detroit	100.0	0.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	*	*	*	*	*	*
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	*	*	*	*	*	*
Houston	*	*	*	*	*	*
Los Angeles	0.0	0.0	0.0	0.0	0.0	0.0
San Francisco	96.9	0.0	0.0	0.0	0.0	0.0
Denver	0.0	0.0	0.0	0.0	0.0	0.0
Average	65.6%	0.0%	4.5%	23.3%	0.0%	0.0%
Median	80.0%	0.0%	23.3%	100.0%	0.0%	0.0%

TABLE 61

CARDHOLDER POS SERVICE CHARGES

No		Yes	
1985	1986	1985	1986
72.0%	69.6%	28.0%	30.4%

TABLE 62

CARDHOLDER POS SERVICE CHARGES — TYPES OF FEES

Per Transaction		Flat Fee		Account Balance Below Minimum		Interchange Transaction Only		Other	
1985	1986	1985	1986	1985	1986	1985	1986	1985	1986
71.0%	35.7%	0.0%	7.1%	N/A	28.6%	N/A	7.1%	29.0%	21.4%

TABLE 63

CARDHOLDER POS SERVICE CHARGES — COMPARED TO ATM SERVICE CHARGES

No		Yes	
1985	1986	1985	1986
31.0%	39.3%	69.0%	60.7%

TABLE 64

MERCHANT POS SERVICE CHARGE PAID — BY TERMINAL OWNERSHIP

Bank's Terminal				Merchant's Terminal			
No		Yes		No		Yes	
1985	1986	1985	1986	1985	1986	1985	1986
88.0%	91.4%	12.0%	8.6%	100.0%	88.2%	0.0%	11.8%

TABLE 65

MERCHANT POS SERVICE CHARGE PAID — TYPES OF FEES

Per Transaction		Flat Fee		Other	
1985	1986	1985	1986	1985	1986
66.0%	57.1%	0.0%	7.1%	33.0%	35.7%

TABLE 66

MERCHANT POS SERVICE CHARGE RECEIVED — BY TERMINAL OWNERSHIP

Bank's Terminal				Merchant's Terminal			
No		Yes		No		Yes	
1985	1986	1985	1986	1985	1986	1985	1986
47.0%	36.3%	53.0%	43.8%	33.0%	57.6%	66.0%	42.4%

TABLE 67

MERCHANT POS SERVICE CHARGE RECEIVED — TYPES OF FEES

Per Transaction		Flat Fee		Both		Other	
1985	1986	1985	1986	1985	1986	1985	1986
57.0%	47.6%	0.0%	4.8%	29.0%	19.0%	14.0%	28.6%

Appendices

Appendix A

1986 Survey Questionnaire

1986 Survey of Electronic Funds Transfer Transactions

Bank Administration Institute
A RETAIL FINANCIAL SERVICES GROUP PROJECT

INSTRUCTIONS

- Please report data captured during all business days in September, 1986.
- The Comments, Section XVII, should be completed at the end of the survey period.
- Since you may be unable to answer all questions, please respond with "N.A." if the question does not apply to your bank, or with a "zero" where appropriate.
- Please read all definitions before completing the survey.
- Mail the completed survey booklet to:

  1986 EFT Survey
  Bank Administration Institute
  60 Gould Center
  Rolling Meadows, Illinois 60008

- If you have any questions, please call Kristine K. Groh at (312) 228-2428

BANK ADMINISTRATION INSTITUTE

Survey of Electronic Funds Transfer Transactions

Date ____________________

Financial Institution ____________________

Street Address ____________________

City ____________________ State__________ Zip__________

Name ____________________ Title ____________________
(of person to be contacted about survey data)

Address ____________________ Phone ____________________
(if different from above)

Name ____________________ Title ____________________
(of person to whom completed survey is to be returned, if different from above)

Institution Asset Size (Check one)

________ Less than $1 billion

________ Greater than $1 billion

363J2g

Please report all actual counts. *Do not round off.*

ACH TRANSACTIONS—any electronic funds transfer transactions processed through a local or regional automated clearinghouse, including any items you have processed for your own customers.

RETURNED ACH TRANSACTIONS:

Originated—any ACH transaction that you returned to the originator because you were unable to post to an account or for which no prenotification was on file.

Received—any ACH transaction that you originated, but which was returned to you by the ACH or the intended receiver.

ACH DEBIT TRANSACTIONS:

Insurance Premium, Home Mortgage—any ACH transaction originated or received by you for the payment of a consumer obligation.

PC/Telephone Bill Payment—any ACH transaction originated or received by you as a result of a PC banking program or telephone bill payment program at a financial institution.

Corporate Payment, Corporate Trade Payment—any ACH transaction originated or received by you that was originated by a corporation for the account of another corporation or financial institution.

I. ACH TRANSACTIONS

QUESTION	TOTAL MONTH	
	Originated	Received
1./2. Debits	1.	2.
3./4. Credits	3.	4.
5./6. Total ACH Transactions (Add Columns)	5.	6.

II. RETURNED ACH TRANSACTIONS

QUESTION	TOTAL MONTH	
	Originated	Received
7./8. Debits returned	7.	8.
9./10. Credits returned	9.	10.
11./12. Total returned Transactions (Add Columns)	11.	12.

III. ACH DEBIT TRANSACTIONS

QUESTION	TOTAL MONTH	
	Originated	Received
13./14. Insurance premium	13.	14.
15./16. Home mortgage	15.	16.
17./18. PC/Telephone bill payment	17.	18.
19./20. Corporate payment—replacement for depository transfer	19.	20.
21./22. Corporate trade payments	21.	22.
23./24. Other payments	23.	24.
25./26. Total ACH debit Transactions (Add Columns)	25.	26.

ACH CREDIT TRANSACTIONS:

Payroll, Social Security—any ACH transaction originated or received by you for the payment of consumer income.

Corporate Loan Payment, Corporate Trade Payment—any ACH transaction originated or received by you that was originated by a corporation for the account of another corporation or financial institution.

IV. ACH CREDIT TRANSACTIONS

QUESTION	TOTAL MONTH	
	Originated	**Received**
27./28. Payroll	27.	28.
29./30. Social Security	29.	30.
31./32. Corporate loan payments	31.	32.
33./34. Corporate trade payments	33.	34.
35./36. Other credits	35.	36.
37./38. Total ACH credit Transactions (Add Columns)	37.	38.

39. Does your bank perform your own ACH processing (originating and receiving)? (Circle one)

1. No 2. Yes

40. Does the ACH Association to which you belong process all of its items through the Federal Reserve System? (Circle one)

1. No 2. Yes

42. Would you prefer to use a private sector processor as an alternative? (Circle one)

1. No 2. Yes

43. Does your bank place a dollar limitation on ACH transactions? (Circle one)

1. No 2. Yes

If answer is Yes to No. 43, what are the dollar limitations?

44. Credits ____________________

45. Debits ____________________

46. In what year was your Automated Teller Machine (ATM) program introduced?

Year ____________________

Are you operating in a proprietary ATM environment? (Circle one)

1. No 2. Yes ⟶

If *no* (meaning you are in a shared network), complete Tables V and VI below and continue to Table VII.

If *yes* do you plan to participate in a shared ATM environment in the next year? (Circle one)

1. No. 2. Yes

Please complete Table V below and skip to Table VII.

V. ATM TRANSACTIONS—PROPRIETARY

Please report all actual counts. Do *not* round off.

ATM TRANSACTIONS—PROPRIETARY—any transactions initiated at *your* bank's automated teller machine by *your* customers.

QUESTION	TOTAL MONTH
47. Total number of cash withdrawals from checking.	**47.**
48. Total number of cash withdrawals from savings.	**48.**
49. Total number of cash withdrawals from credit card.	**49.**
50. Total number of balance inquiries	**50.**
51. Total number of transfers between checking, savings, and credit card accounts.	**51.**
52. Total number of checking deposits received.	**52.**
53. Total number of savings deposits received.	**53.**
54. Total number of bill payments.	**54.**
55. Total number of *other* ATM transactions.	**55.**
56. Total ATM transactions. (Add No. 47-No. 55)	**56.**
57. Total dollar value of items in No. 47.	**57.**
58. Total dollar value of items in No. 48.	**58.**
59. Total dollar value of items in No. 49.	**59.**
60. Total dollar value of items in No. 52.	**60.**
61. Total dollar value of items in No. 53.	**61.**
62. Total dollar value of items in No. 54.	**62.**

VI. SHARED ATM TRANSACTIONS—INTERCHANGE

Please report all actual counts. Do *not* round off.

SHARED ATM TRANSACTIONS INTERCHANGE—any transactions initiated at *your* bank's automated teller machine by *another* financial institution's customer

QUESTION	TOTAL MONTH
63. Total number of cash withdrawals from checking.	**63.**
64. Total number of cash withdrawals from savings.	**64.**
65. Total number of cash withdrawals from credit card.	**65.**
66. Total number of balance inquiries.	**66.**
67. Total number of transfers between checking, savings, and credit card accounts.	**67.**
68. Total number of checking deposits received.	**68.**
69. Total number of savings deposits received.	**69.**
70. Total number of bill payments.	**70**
71. Total number of *other* ATM transactions.	**71.**
72. Total ATM transactions. (Add No. 63-No. 71)	**72.**
73. Total dollar value of items in No. 63.	**73.**
74. Total dollar value of items in No. 64.	**74.**
75. Total dollar value of items in No. 65.	**75.**
76. Total dollar value of items in No. 68.	**76.**
77. Total dollar value of items in No. 69.	**77.**
78. Total dollar value of items in No. 70.	**78.**

VII. ATM LOCATIONS

Please complete the following questions:		MAIN OFFICE				BRANCH OR FACILITY OFFICES				OFF-PREMISE UNITS							TOTAL
		Lobby	Vestibule	Through the Wall	Drive-up	Lobby	Vestibule	Through the Wall	Drive-up	Free Standing	University/College	Shopping Center	Grocery/Retail Store	Office/Corporate Complex	Hospital	Other	(Add rows across)
How many automated teller machines/cash dispensers do you presently have in service?	Automated Teller Machine	79.	80.	81.	82.	83.	84.	85.	86.	87.	88.	89.	90.	91.	92.	93.	94.
	Cash Dispenser	95.	96.	97.	98.	99.	100.	101.	102.	103.	104.	105.	106.	107.	108.	109.	110.
How many automated teller machines/cash dispensers do you plan to install in the next 12 months?	Automated Teller Machine	111.	112.	113.	114.	115.	116.	117.	118.	119.	120.	121.	122.	123.	124.	125.	126.
	Cash Dispenser	127.	128.	129.	130.	131.	132.	133.	134.	135.	136.	137.	138.	139.	140.	141.	142
What was the total volume of *proprietary* ATM transactions for all machines installed at each location during the test period, excluding balance inquiries?	Automated Teller Machine	143.	144.	145.	146.	147.	148.	149.	150.	151.	152.	153.	154.	155.	156.	157.	158.
	Cash Dispenser	159.	160.	161.	162.	163.	164.	165.	166.	167.	168.	169.	170.	171.	172.	173.	174.
What was the total volume of *interchange* ATM transactions for all machines at each location during the test period, excluding balance inquiries?	Automated Teller Machine	175.	176.	177.	178.	179.	180.	181.	182.	183.	184.	185.	186.	187.	188.	189.	190
	Cash Dispenser	191.	192.	193.	194.	195.	196.	197.	198.	199.	200.	201.	202.	203.	204.	205.	206.

Of the total Automated Teller Machine installations planned for the next 12 months, as identified in box No. 126, how many of the installations are defined as replacements, redeployments, and new installations?

207._______ Replacements (new machine placed in the same location as an existing machine)

208._______ Redeployments (an existing machine moved to a new location)

209._______ New installations (new machine placed in a new location)

_______ TOTAL (Must equal number in box No. 126)

NUMBER OF CARDS OUTSTANDING—total number of cards issued since ATM program introduction with validated access capability.

NUMBER OF ACTIVE CARDS—total number of ATM access cards with a usage rate of at least once per month.

VIII. ATM ACCESS CARDS

Type of ATM Access Card	Number of Cards Outstanding	Number of Active Cards
Proprietary or shared ATM cards	210.	211.
VISA debit card	212.	213.
VISA credit card	214.	215.
MasterCard debit card	216.	217.
MasterCard credit card	218.	219.
Other (please specify) ____________________ ____________________	220.	221.
TOTALS (Add columns)	222.	223.

224. How did your bank issue Personal Identification Numbers (PINs) when your ATM program was first introduced? (Circle one)

1. Computer generated PINs
2. Customer selected PINs
3. Both

225. How does your bank currenty issue PINs? (Circle one)

1. Computer generated PINs
2. Customer selected PINs
3. Both

IX. ATM SERVICE CHARGES

226. Does your bank levy a service charge on customers for using the ATM? (Circle one)

1. No 2. Yes

227. If answer is no to No. 226, does your bank plan to levy a service charge in the next year on customers for using the ATM? (Circle one)

1. No 2. Yes

228. If answer is yes to No. 226, how is your service charge on ATM transactions structured? (Circle one)

1. Per transaction charge
2. Flat fee
3. Flat fee and per transaction charge
4. Fee is assessed only if account is below a minimum balance requirement.
5. Fee is assessed on interchange transactions only
6. Other (please specify) ______________________________

229. Is your service charge for ATM transactions ________ the service charge for DDA paper items? (Circle one)

1. Higher than
2. Lower than
3. The same as

X. ATM OTHER

230. Are your ATMs/cash dispensers currently (Circle one)

1. On-line?
2. Off-line?

231. Do you automatically provide balance information with each transaction? (Circle one)

1. No 2. Yes

Are you currently operating in a proprietary POS environment? (Circle one)

1. No 2. Yes

If **yes** complete Table XI only and skip to Table XIII.

If **no** (meaning you are participating in an interchange POS environment), complete Tables XI and XII below and continue to table XIII.

If you are not participating in any kind of POS environment at this time, please skip to Table XVII.

XI. POS TRANSACTIONS—PROPRIETARY

Please report all actual counts. Do *not* round off.

POS TRANSACTIONS—PROPRIETARY—any transactions initiated by *your* customers at *your bank's merchant, where the transaction is electronically authorized and captured for processing. The electronic device does not* dispense cash to the customer.

QUESTION	TOTAL MONTH
232. Total number of debits to checking.	**232.**
233. Total number of debits to savings.	**233.**
234. Total number of debits to credit card.	**234.**
235. Total number of debits to other account.	**235.**
236. Total POS transactions. (Add No. 232-No. 235)	**236.**
237. Total dollar value of items in No. 232.	**237.**
238. Total dollar value of items in No. 233.	**238.**
239. Total dollar value of items in No. 234.	**239.**
240. Total dollar value of items in No. 235.	**240.**

XII. POS TRANSACTIONS—INTERCHANGE

Please report all actual counts. Do *not* round off.

POS TRANSACTIONS—INTERCHANGE—any transactions initiated by *another* financial institution's customer at *your* bank's merchant, where the transaction is electronically authorized and captured for processing. The electronic device does *not* dispense cash to the customer.

QUESTION	TOTAL MONTH
241. Total number of debits to checking	**241.**
242. Total number of debits to savings.	**242.**
243. Total number of debits to credit card.	**243.**
244. Total number of debits to other account.	**244.**
245. Total POS transactions. (Add No. 241-No. 244)	**245.**
246. Total dollar value of items in No. 241.	**246.**
247. Total dollar value of items in No. 242.	**247.**
248. Total dollar value of items in No. 243.	**248.**
249. Total dollar value of items in No. 244.	**249.**

If a PIN is required to use the terminal, please respond to the question in the row marked *yes.*

If a PIN is *not* required to use the terminal, please respond to the question in the row marked *no.*

STAND-ALONE UNIT—an electronic device that will authorize and capture a monetary transaction.

SCRIPT WRITER—an electronic device that will authorize and capture a monetary transaction, activated by the customer and given script to be presented to the merchant.

ELECTRONIC CASH REGISTER—an electronic device that will capture a monetary transaction within the cash register or a device linked to the cash register.

XIII. POS TERMINALS—LOCATIONS

		Are PINs Required?	Gas Station Only	Gas/Convenience Store	Convenience Store	Supermarket	Retailer	Other	TOTAL (Add row across)
How many terminals do you presently have in service?	Stand-Alone Unit	Yes	250.	251.	252.	253.	254.	255.	256.
		No	257.	258.	259.	260.	261.	262.	263.
	Script Writer	Yes	264.	265.	266.	267.	268.	269.	270.
		No.	271.	272.	273.	274.	275.	276.	277.
	Electronic Cash Register	Yes	278.	279.	280.	281.	282.	283.	284.
		No	285.	286.	287.	288.	289.	290.	291.
How many terminals do you plan to install in the next 12 months?	Stand-Alone Unit	Yes	292.	293.	294.	295.	296.	297.	298.
		No	299.	300.	301.	302.	303.	304.	305.
	Script Writer	Yes	306.	307.	308.	309.	310.	311.	312.
		No	313.	314.	315.	316.	317.	318.	319.
	Electronic Cash Register	Yes	320.	321.	322.	323.	324.	325.	326.
		No	327.	328.	329.	330.	331.	332.	333.
What was the total volume of *proprietary* POS transactions for all terminals installed at each location during the survey period?	Stand-Alone Unit	Yes	334.	335.	336.	337.	338.	339.	340.
		No	341.	342.	343.	344.	345.	346.	347.
	Script Writer	Yes	348.	349.	350.	351.	352.	353.	354.
		No	355.	356.	357.	358.	359.	360.	361.
	Electronic Cash Register	Yes	362.	363.	364.	365.	366.	367.	368.
		No	369.	370.	371.	372.	373.	374.	375.
What was the total volume of *interchange* POS transactions for all terminals installed at each location during the survey period?	Stand-Alone Unit	Yes	376.	377.	378.	379.	380.	381.	382.
		No	383.	384.	385.	386.	387.	388.	389.
	Script Writer	Yes	390.	391.	392.	393.	394.	395.	396.
		No	397.	398.	399.	400.	401.	402.	403.
	Electronic Cash Register	Yes	404.	405.	406.	407.	408.	409.	410.
		No	411.	412.	413.	414.	415.	416.	417.

NUMBER OF CARDS OUTSTANDING—total number of cards issued since ATM/POS program introduction with validated access capability.

NUMBER OF ACTIVE CARDS—total number of ATM/POS access cards with a usage rate of at least once per month.

XIV. POS ACCESS CARDS

Type of POS Access Card	Number of Cards Outstanding	Number of Active Cards
Proprietary or shared ATM/POS cards	418.	419.
VISA debit card	420.	421.
VISA credit card	422.	423.
MasterCard debit card	424.	425.
MasterCard credit card	426.	427.
Other (please specify) ____________________ ____________________	428.	429.
TOTALS (Add columns)	430.	431.

XV. POS SERVICE CHARGES TO YOUR CARDHOLDER

432. Does your bank levy a service charge on customers for using a POS terminal? (Circle one)
1. No 2. Yes

433. If answer is no to No. 432, does your bank plan to levy a service charge, in the next year, on customers for using ATM/POS cards? (Circle one)
1. No 2. Yes

434. If answer is yes to No. 432, how is your service charge on POS transactions structured? (Circle one)

1. Per transaction charge
2. Flat fee
3. Flat fee and per transaction charge
4. Fee is assessed only if account is below a minimum balance requirement
5. Fee is assessed on interchange transactions only
6. Other (please specify) ______________________________

435. Is your service charge for POS transactions the same charge for ATM transactions? (Circle one)
1. No 2. Yes

XVI. POS SERVICE CHARGES AND YOUR MERCHANT

436. Do you *pay* a service charge to the merchant if your customer uses *your* POS terminal at their location? (Circle one)
1. No 2. Yes

437. Do you *pay* a service charge to the merchant if your customer uses the *merchant's* POS terminal at their location? (Circle one)
1. No 2. Yes

438. How is the service charge paid on these POS transactions structured? (Circle one)

1. Per transaction
2. Flat fee
3. Flat fee and per transaction charge
4. Other (please specify) ______________________________

439. Do you *receive* a service charge from the merchant if your customer uses *your* POS terminal at their location? (Circle one)
1. No 2. Yes

440. Do you *receive* a service charge from the merchant if your customer *uses* the *merchant's* POS terminal at their location? (Circle one)
1. No 2. Yes

441. How is the service charge received on these POS transactions structured? (Circle one)

1. Per transaction
2. Flat fee
3. Flat fee and per transaction charge
4. Other (please specify) ______________________________

XVII. COMMENTS

NOTE: The results of the past Electronic Funds Transfer Transactions Survey contained appendices devoted to commentary from the nation's EFT professionals. Please provide your comments so that we can continue this valuable forum. How have conditions changed from last year? What threats and/or opportunities will these items present in the future? How should they be handled? Attach a separate sheet if you need more space.

ACH settlement ______________________________

ACH prenotifications ______________________________

ACH return items ______________________________

ATM settlement ______________________________

ATM vandalism ______________________________

ATM availability ______________________________

ATM fraud/losses ______________________________

ATM security ______________________________

Regulation E ____________________

____

____

____

POS settlement ____________________

____

____

____

POS return items ____________________

____

____

____

POS fraud/losses ____________________

____

____

____

POS security ____________________

____

____

____

Telecommunications ____________________

____

____

____

Additional comments ____________________

____

____

____

____

Appendix B

EFT Geographic Areas

Figure B-1
EFT Geographic Areas

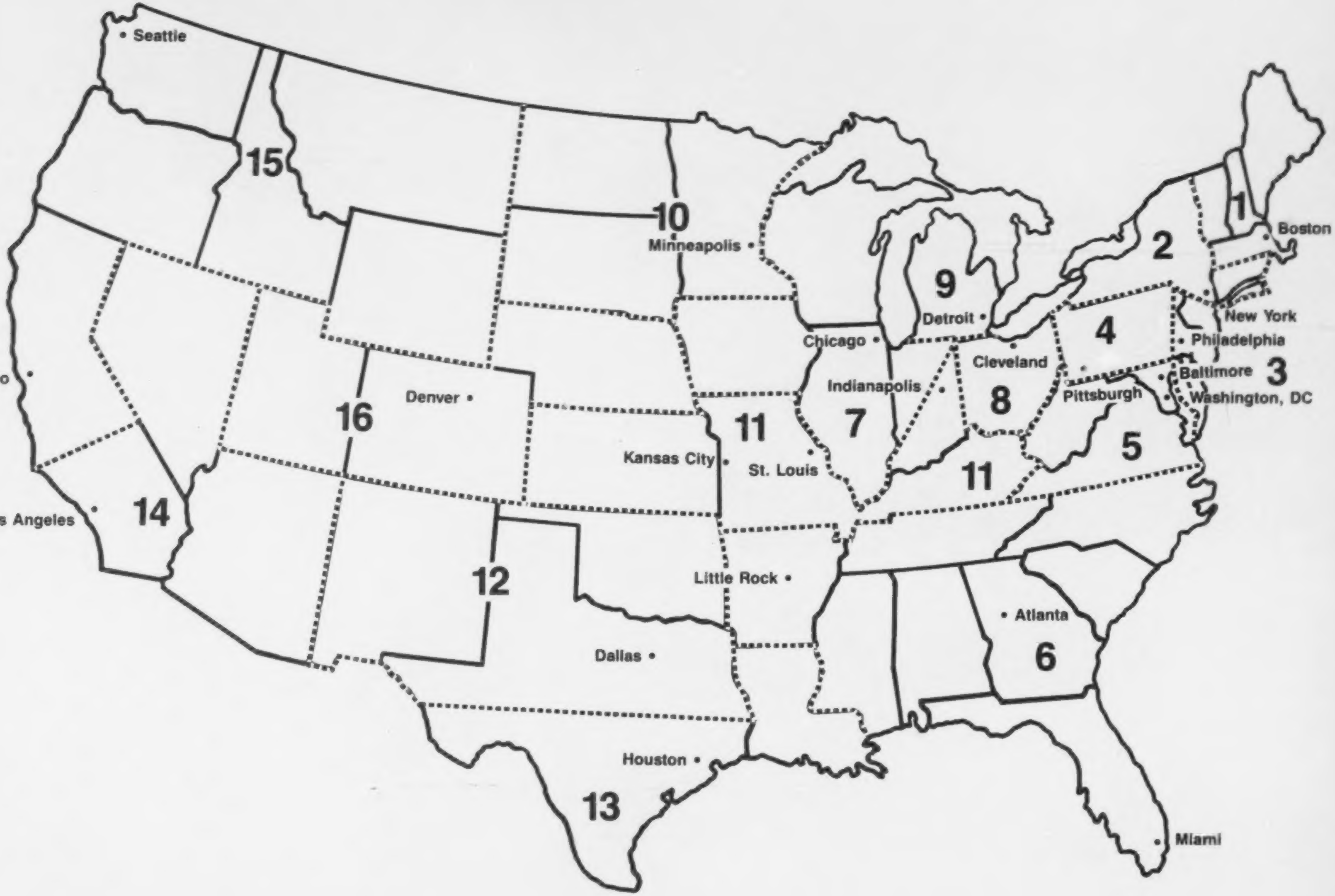
Seattle
15
10
Minneapolis
9
Detroit
1
Boston
2
New York
Philadelphia
4
Chicago
Cleveland
Baltimore
3
Indianapolis
Pittsburgh
Washington, DC
San Francisco
Denver
16
11
7
8
5
Kansas City
St. Louis
11
Los Angeles
14
12
Little Rock
Atlanta
6
Dallas
Houston
13
Miami

TABLE B-1

NUMBER OF SURVEY RESPONDENTS BY REGION

Region	1984	1985	1986
Boston	4	10	11
New York	13	9	14
Philadelphia	11	10	10
Pittsburgh	2	2	4
Washington, D.C.	8	4	9
Atlanta	15	12	25
Chicago	8	10	8
Cleveland	7	7	6
Detroit	5	8	7
Minneapolis/St. Paul	1	2	2
St. Louis	10	6	11
Dallas	4	4	3
Houston	1	1	1
Los Angeles	7	9	9
San Francisco	8	10	14
Denver	4	3	5
Total	110	107	139

Appendix C

Comments Supplied by Bankers

Appendix C

Comments Submitted by Bankers

This section, the purpose of which is to provide information about overall issues concerning ACH, ATM, and POS payment systems, contains comments by bankers who participated in BAI's 1986 EFT Survey. References to specific organizations, vendors, or pieces of equipment are omitted. However, comments regarding working relations with Federal Reserve banks and other financial institutions that are pertinent to the overall functioning of the EFT system have been included to promote efforts by all participants for improvement.

Comments

ACH Settlement

"ACH settlement for correspondents should be automated. Most large financial institutions settle for many smaller receivers, and settlement must be passed manually to the proper accounts."

"ACH software should be updated to generate automated settlement entries to banks using members' Fed accounts."

"Fed changes in net settlement processes initially caused reconcilement problems."

"The main concern over the past year has been with daylight overdrafts and return item risks. These items have affected the way we make funds available to our customers as part of our overall settlement. These matters will continue to be addressed. Also of concern is the proposed Fed charges for night cycle processing and the proposal for allocating float. We are deeply concerned about the proposals, and this concern certainly will affect our processing and settlements with our customers and with the Fed."

"Not all customers should be allowed to use ACHs on weekends or holidays."

"We view the possible Regulation E change as a severe threat to us as a financial institution, because it would allow retailers to do their own POS via ACH."

"The recent implementation of net settlement position caps by the Federal Reserve to reduce risk is appropriate."

"We are working on an automated G/L interface."

ACH Prenotifications

"NACHA has asked each ACH association for commentary on a proposal to fine member institutions who ignore prenotes, fail to respond to rejections, and so forth. This is greatly needed."

"Because receivers are charged for returning prenotes that contain invalid data to originators, it is causing more problems than ever; i.e., using mail delivery, not responding to avoid charge, or delay because of mail. Maybe the charge should be to the originator on prenotes and notice of charge entries received."

"PPD transactions should continue to be prenoted in the future to avoid massive rejects on live transactions."

"Invalid account numbers on prenotifications are addressed immediately, but we feel it takes far too long for the system to correct itself."

"There still remains a problem with the timeliness of prenotification response by DFIs. More enforcement should be implemented to ensure that RDFIs are complying with the 10-day prenote period outlined by NACHA."

"Only debit prenotes should be required; credit prenotification can be optional."

"Within the ACH network, there are many banks that do not acknowledge prenotes. Therefore, return notifications are not being sent prior to the start of the live transactions. When the live transactions are sent, and if they are in error, it causes delay in posting potential returns."

"Prenotifications are not responded to in most cases. Action is not taken by the receiving bank until a dollar entry is received."

"If ACH transactions allowed a 10 percent variance of amounts without additional prenotification, the ACH service probably would find increased uses, such as utility bill and credit card payments."

"We continue to prefer to have prenotes, especially on credit transactions. They have prevented potential losses and, in terms of originating, most customers feel more comfortable using prenotes for credits."

"Prenotes should continue to be used. We also feel that the lead time for a prenote should be increased from 10 to 15 days prior to the first live transaction."

"We are not pleased with the promptness with which other banks and the Federal Reserve Bank process prenotes."

"We have continued to experience a lack of responsiveness by RDFIs to prenotes. While we feel the process should not be required for originators, we do feel that when a prenote is issued, it should be responded to within the same time constraints as live-dollar items."

"Prenotes, notice of changes, and corrections are a major problem. The problem has intensified with bank merger activities. Originating customers, such as those in the insurance industry, are not very responsive. Delays of eight to 10 weeks are common before changes are made, and this causes some negative customer impact."

"With the FRB changes, notifications are not being returned if institutions do not have automated systems. This means an increase of return items for invalid information on live dollars and less preauthorized returns."

"The importance of prenotes should be emphasized much more. If originating banks are following procedures of prenoting before the live transactions, the receiving banks should respond on a timely basis. This prevents problems from both ends (receiving and originating)."

"We will be rejecting entries that are not prenoted."

"We need policing, and perhaps fines."

ACH Return Items

"NACHA is proposing the formation of a national arbitration board primarily to handle disputes on returns and any failures by member institutions to conform to NACHA rules."

"ACH return items has improved because of automation at the Federal Reserve level, but settlement for the returns are causing problems. Return settlements are comingled with those for ACH items."

"Misrouting of returns makes the items untimely when they finally reach the correct RFI."

"Items often are returned to us in error."

"Our return item processing is automated, which proves very advantageous in terms of decreased cost, timely processing, and settlement. The few problems or discrepancies we encountered were resolved with the help of the ACH."

"Automated return items still do not give the information needed to process corrections to originating companies. Return reasons are vague or often not even provided. This problem should be addressed again."

"We automated returns in September 1985, and are extremely pleased with the cost savings and improved accuracy. The timeliness of returns in general has improved greatly over the last year."

"We began automating returns in March 1986. At this time, substantial savings were seen due to a reduction from $2.50 per paper return to $0.0175 per automated return. This was part of the new software package installed in December 1985."

"In the past year, we have found that our originating companies have grown increasingly sensitive to the amount of time that passes before they are notified of the return. Within our bank, we have taken a number of steps to automate the notification process, thereby lessening the time before the company is aware of the return. However, we would like to see NACHA do more to enforce the rules regarding turnaround time on returns at the receiving depository financial institution.:

"Receipt of return items have improved since the Federal Reserve has implemented the automation of the return item. But the number of errors in non-critical fields of the return item is causing confusion among the originators of the items."

"A better system should be developed for deceased Social Security returns. Banks are in constant threat of losses. Through our experience, Social Security requests for refund usually cross with our bank's returns of the same item. This results in double payment. It is very difficult and time-consuming to receive a refund from the Social Security system."

ATM Settlement

"There are too many holdover items caused by settlement with other networks at different times of the day."

"Settlement is being handled at the machine level and not centrally. We are balancing the ATM cash once a week instead of daily, which frees the balancing teller to perform other duties."

"Settlement at banking office installations does not present a problem. Off-site locations settled by the closest branch represents a burden for the servicing branch. We continue to investigate third party vendors to settle off-site locations. However, minimal locations preclude usage because of expense. Overall network settlements have become more complex with recent participation in regional and national networks."

"Settlement with shared networks are awkward because of the delay between settlement and the time work is received. We are working with the network to transmit reports on a same-day basis, but the fees may be too high."

"Settlement of branch ATMs still is done by branch personnel. Corporate sites are balanced by a department of trained technicians in the bank and, in some instances, by a third party vendor. Transactions at all ATMs later are proved out by a central balance unit within the bank. This department also is responsible for settling with our local and national switches."

"This past year we discontinued doing our deposit settlement centrally and moved this procedure out to the branch. Settlement at off-premise ATMs are performed by having an outside armored car company sweep the depository, replenish cash, and deliver deposits and related work to us to be performed centrally."

ATM Vandalism

"We have experienced increased incidents of ATM vandalism at both older and newer locations."

"We experienced one minor incident of vandalism."

"The area we have experienced the most problems with is in the ATMs' keyboard overlays (key pads). We periodically have had to replace these parts because of cuts or holes being made in them by knives or other sharp objects."

"We have experienced minimal vandalism primarily because of the location of our ATMs and our overall market."

"Vandalism has decreased overall, apparently because of the customers' awareness of surveillance equipment."

"Mostly minor incidents of vandalism have taken place—surprisingly few for the number of transactions and placement of some machines. Most of them have affected ATM enclosures instead of ATMs. They don't affect the machine's ability to function."

"Overall, vandalism is not that high. However, being able to apprehend the one responsible is difficult since most of them occur after normal business hours and cameras photograph only during a transaction. If cameras are not in use, thought should be given to some sort of 24-hour surveillance, such as VCR monitoring.

"We continue to see an increase at our 24-hour walk-up and drive-up ATMs. No problems at off-premise sites."

"Customer assistance telephones are being ripped out."

ATM Availability

"We measure our ATM availability in three ways: host (on-line) availability, terminal availability (hardware), and, most important, customer ATM availability."

"Our availability is very high system-wide because of refined procedures and trained personnel."

"No matter what level we attain, we can't satisfy everyone. We are examining the purchase of a fault-tolerant CPU to drive the ATM network."

"Our availability to the customers continues to improve. We are in the process of joining a third ATM interchange that, along with improvements in hardware, will greatly increase our availability again."

"ATM availability has increased because of changes in maintenance personnel; we added more branch personnel to service ATMs."

"The industry may be moving back up to host processing."

"ATM availability is increasingly important to convert non-users and to keep users' statistics."

"Since January 1986, we began monitoring availability based not only on lost hours of operation but also customer transactions affected because of unavailability."

ATM Fraud/Losses

"We have had a slight increase over 1985. This is primarily caused by the increase in the withdrawal limits."

"Even with the increased ATM transaction volumes, we are maintaining a low level of fraud/losses."

"Our losses have increased because of the many customers who claim they did not receive all cash requested or received no money and yet were charged. There is no central settlement with regional networks to verify if ATM is settled or was over in cash. We must take the loss. We have no problems with the proprietary network."

"Losses are minimal because of our on-line ATM system and our ability to verify availability of funds before money is dispensed."

"We have had far too many losses because the customer fails to take care of his/her personal identification number.

"Even though we have not had any significant losses, availability of uncollected funds being deposited through the ATM opens the bank up to a great deal of exposure. What kinds of things are being done in this area?"

"Customers who carelessly or negligently write their password/PIN on their cards should be liable for more than the current $50. We suggest a minimum of $200 prior to notification."

"We are experiencing increasing losses because of unauthorized use. We also are experiencing losses as a result of the network processing adjustments slowly and customers closing their accounts after 10 days, but before we receive the results back. Empty envelope deposits also are increasing."

"Since the majority of these losses occur in an off-line data capture mode, we currently are testing a program where the data capture is disconnected, thereby forcing the ATM to shut down if it goes off-line. With the ATM in an on-line only mode, off-line transactions, such as withdrawing against insufficient funds, cannot be accomplished, thereby reducing fraud/losses."

"We are greatly concerned about the growing fraud that is characterized by placing empty envelopes (deposits), getting immediate credit, and being able to withdraw up to a set amount as permitted by the financial institution. Competition helps to set this amount (perhaps 'help' is not the right word)!"

"ATM fraud losses are increasing, but still are a small percentage compared to total dollars deposited and withdrawn."

ATM Security

"During the past six months, we have begun to install video cameras in selected ATM locations."

"We currently are producing a brochure, to be sent out with the customer's statement, that focuses on security when using the ATM. The brochure offers do's and don'ts when approaching and using the ATM. We hope to make the customer more aware of situations that could occur.

"Twenty-four hour surveillance, such as VCR recordings, would aid in determining vandal culprits and would give better quality pictures for identifying fraud customers."

"We utilize cameras installed in select locations and third-party servicing at locations that have exposure to high risk."

"We consider ATM security to be increasingly important as a means of converting non-users."

Regulation E

"We are not in favor of the proposed changes to Regulation E regarding POS transactions at service vendors because the burden is on the bank to determine what the transaction is. There is nothing in the proposal about the vendor being obligated to provide the bank with transaction information within 10 days."

"We have experienced an increase in Regulation E claims over the past 12 months. Losses have been concentrated around "unauthorized" use of ATM cards. Customers are becoming more aware of their rights through disclosure statements."

"Message formats/contents/length need to be standardized to ensure compliance vis-à-vis statement descriptions. There are no required standards regarding address, including terminal ID number, city, state, and terminal owner/financial institution. Standards are needed to handle cardholder transactions at foreign ATMs properly. Standards also should cover NACHA, regional, national, and international networks."

"The regulation should be changed to make the customer accountable for losses when the personal identification number is readily accessible."

"The majority of bank losses result from the customer bias of Regulation E. There is no ironclad way of determining when the customer was aware of a lost/stolen card."

"The majority of disputes governed by Regulation E are customer errors."

"Proposed FRB changes would allow others that did not pay to build and/or not pay to support EFTS systems to provide EFTS services without being obligated to properly report to the customer using the EFTS services. Thus, all burdens to resolve and/or absorb their mistakes, errors, and/or misunderstandings with the customer would be added to the banks where the customer's account resides. This is an unfair burden on banks in general."

"ATM cardholders should take 'reasonable care' of their PINs and not use common and available information, such as birthdate, address, phone number. Use of this type of information, to some degree, contributes to fraudulent use of their cards. Customer liability in such cases would be appropriate."

"Proposed changes to relieve third-party processors of statementing responsibility could damage the security and competitive position of regional networks and cause risk and confusion to the consumer."

"Annual mailing for disclosure requirements is wasteful and unnecessary. This annual disclosure causes more problems for the consumer than the understanding of Regulation E, as intended.

POS Settlement

"Most networks utilize midday settlement cutoffs. Such an approach indicates a lack of concern for the retail merchant environment since retailers are not oriented toward so disruptive an approach. If POS is to be successful, banks must recognize what the market wants."

POS Security

"I am concerned about the recent state of PINless POS experiments. I realize that POS development is slower than expected, but I am concerned about the large retailers' attitude of 'the banks will have to do it our way.'"

"The infusion of PINs' encryption keys to thousands of terminals and/or PIN pads will be a management challenge."

Additional Comments

"In order to reduce financial exposure when dealing with direct deposit reclamations, more responsibility should fall on the beneficiary or estate to notify the appropriate financial institutions of the death of the customer. There have been cases where funds continued to be deposited to the account and were drawn by various individuals. It also is the responsibility of the financial institutions to reclaim these funds."

"Our regional interchange has announced a large number of retailers who are live in POS. However, we are very disappointed about the actual number of store locations who actually are live. This situation does not allow the customers to conduct many transactions nor does it provide us (the bank) with an incentive to promote POS to our cardholders."

"We own 6,000+ terminals (POS) today and have very few problems because our system is basically self balancing."

"The number of recalled items from receiving institutions is growing, requiring manual processing. We also should take account of the number of phone notifications from originating banks requesting an item be returned in lieu of using ACH reversals to avoid potential loss of funds through customer withdrawal. NACHA and local ACH associations should insist that originating institutions use reversals and implement a procedure to notify receiving institutions so that holds can be placed on accounts."

Retail Financial Services Commission

1986-87

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